



LOUVERS

in Extruded Aluminum

1961

CONSTRUCTION SPECIALTIES, INC.



LEADERSHIP

DESIGN • FABRICATION • FINISHING



in product development

From the development of the first successful extruded aluminum wall louver in 1952 to the introduction of a line of cooling tower screens in 1960, Construction Specialties has originated over 30 new products to assist architects and engineers with their air handling problems. C/S research and engineering is a continuous process directed toward optimum product efficiency and economy as well as sound architectural design.



in aluminum finishing techniques

Construction Specialties pioneered in the application of long life butyrate lacquers and Hi Bake epoxy color coatings to architectural aluminum. C/S has completely integrated in-plant finishing facilities to assure the architect of the finish specified. Facilities include a clear and color anodizing plant under Alcoa license, a caustic etch and lacquer line, and production Hi Bake epoxy color coating equipment.



in technical assistance

Construction Specialties continues to lead the field in supplying architects and engineers with expert technical help, design service and product samples. This service is available through qualified representatives located in 90 major cities throughout the United States and Canada.



in manufacturing quality

Construction Specialties has built its business by consistently delivering a better product. A fully staffed engineering and production organization using the latest technological equipment is the cornerstone of C-S quality. Factory trained field erection supervisors or complete field erection crews are available to fully insure C-S quality in the completed installation.

PLANTS: CRANFORD, N. J. • ESCONDIDO, CALIFORNIA • TORONTO, CANADA

INDEX



Standard Life Building
Indianapolis, Indiana

**Architects Skidmore, Owings
and Merrill, Chicago**

C-S Fixed Louvers A-225, used
in window wall application for
unit air conditioning. Louvers
furnished in Architectural Gray
2030 Anodize.

fixed louvers

standard mullion
architectural horizontal line
flange frame wall louvers
transformer • sightproof
air conditioning—30° blade
panel wall
interior partition grilles
monumental

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Mt. Tom Power Plant
Holyoke, Massachusetts

**Architect: Jackson and
Moreland, Inc.**

Dual combination Louvers with
C-S AL400 Architectural Horizontal
Line Louvers on exterior
and C-S EX110 Multiple Bay
Electrically controlled operating
louvers on interior are used on
this outstanding new power
plant.

operating louvers

manual operating
manual controls
electrical operating
electrical controls

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Industrial Trust Building Corp.,
Wilmington, Delaware

**Architect: Whiteside, Moeckel,
and Carbonell**

C-S JR-555 Vertical Line Louver
used to screen the cooling tower
installation and harmonize with
the vertical line of adjacent
metal siding. This screen was
furnished in a 204R1 anodize and
butyrate lacquer finish.

special louvers

dual combination, operating
90° operating
penthouses
cooling tower screens

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Hampton Roads Tunnel
Hampton Roads, Virginia

**Architects: Parsons,
Brinkerhoff, Hall and
McDonald, New York**

C-S EH-108 Monumental Lou-
vers used as air intake for tun-
nel ventilating building. Finished
in 215 R1 Anodize, protected by
two coats of C-S butyrate lacquer.

screens anchorage finishes

screens
anchorage
finishes

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18
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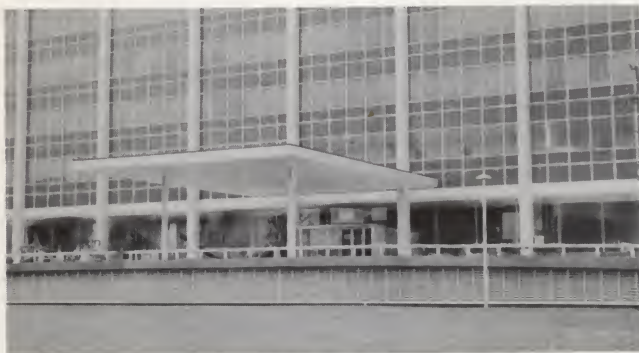
standard mullion louvers

SU-101, SL-104

features

material Extruded aluminum sections 6063-T5 alloy, minimum .081 gauge with reinforcing bosses. All fastenings are stainless steel or aluminum.

slidable interlocked mullions The C-S slidable interlocked mullion is a heavy gauge extruded section with integral tongue and groove construction. Mating sections slide together and remain interlocked providing expansion-contraction, eliminating the necessity of sheet metal cover plates and unsightly field fastenings.



Ford Office Building, Dearborn, Michigan
Architect: Skidmore, Owings and Merrill, New York
C-S SU-101 Standard Mullion Louvers used for air-intake.
Louvers furnished in 215 R1C1 alumilite finish.

efficiency SU-101 louvers have a free area of 52%; SL-104 louvers 43%. These optimum percentages are based on louvers over 16 square feet with standard spacing as detailed. Where conditions indicate a change in blade spacing, contact our engineering department for complete engineering information.

structural head, sill and jambs All C-S head, sill and jamb sections are one piece structural members with formed caulking slots. The head section is equipped with an exterior drip lip and the sill section has an integral water stop. Jambs have returns front and rear to neatly frame and protect the louver blades and to act as a water bar.

suggested specifications

Furnish and install in all openings where so indicated on the drawings, C-S extruded aluminum louvers Stationary Model SU-101 (or SL-104) as manufactured by Construction Specialties, Inc., Cranford, New Jersey (for West Coast use Escondido, California). Frame and blades to be 6063-T5 alloy, minimum .081 gauge, with reinforcing bosses. Heads, sills and jambs to be one piece structural members as detailed, and to have integral caulking slot and retaining bead. Slidable interlocked mullions to have provision for expansion and contraction. Mullions over 84 inches high shall be a minimum .125 gauge. All fastenings to be stainless steel or aluminum. All louvers to be furnished with #2 mesh, .047 diameter wire bird screen secured in removable extruded aluminum frames. All louvers to be free of scratches and blemishes, to be given a six minute caustic etch after fabrication and one coat of CS-64 clear butyrate lacquer.

architectural horizontal line louvers

AL-400, AL-800

features

design C-S designed the AL series to provide a louver which would combine maximum ventilation together with a horizontal line which the architect could make a positive part of his artistic design.

The simplicity of the louver and its ease of erection make the AL Louvers the most economical extruded aluminum louvers available. Access doors or panels may be incorporated as required.

interlocked blade brace The C-S Snap-in interlocked Blade Brace is a C-S exclusive feature. The blade brace sturdily supports the blades from the structural members at the back of the

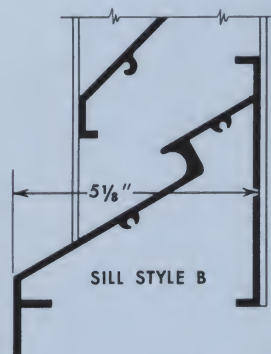
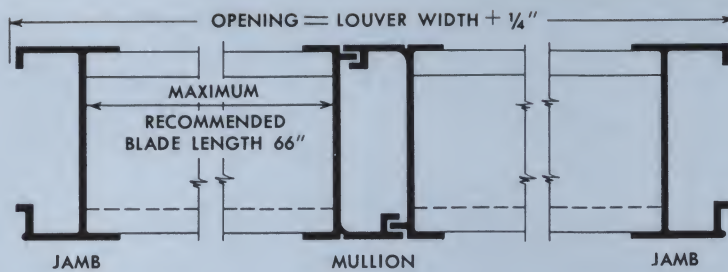
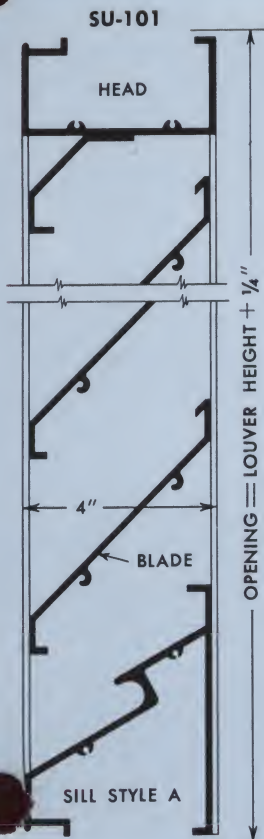


Escondido Union High School, Escondido, Calif.
Architect, George Lykos, San Diego
AL-400 Horizontal Line Louver in 6" depth.

louver opening. The interlocking action eliminates chatter, deflection and up-lift under the heaviest wind loads. The snap-in design makes for fast, easy, accurate field erection. Louvers may be made and installed up to 26 feet wide without joints. Blade braces assure accurate blade line-up to provide virtually invisible joints where horizontal line louvers over 26 feet wide are desired.

suggested specifications

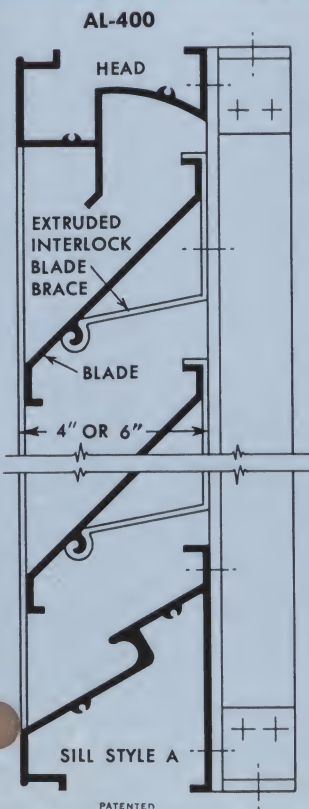
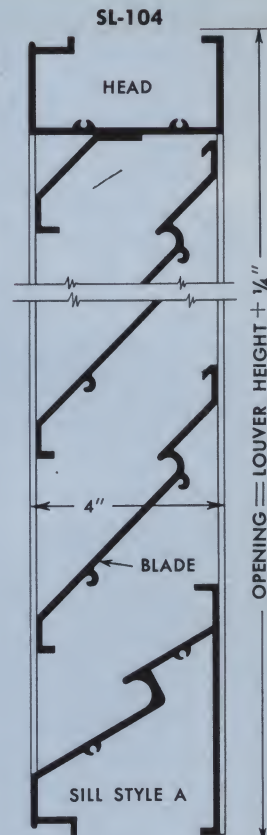
Furnish and install in all openings where so indicated on the drawings, C-S extruded aluminum Architectural Line Louvers, Model AL-400 (or Model AL-800) as manufactured by Construction Specialties, Inc., Cranford, New Jersey (for West Coast use Escondido, California). Frame and blades to be 6063 T5 alloy, extruded aluminum sections, minimum .081 gauge with reinforcing bosses. (Clearly indicate whether 4" or 6" depth is desired). All louvers to be supplied with sills and anchorages as detailed. All blades to be supported and lined up by the use of heavy gauge extruded aluminum blade braces, positively interlocked to each blade and secured to structural angles by stainless steel fastenings. Structural supports to be designed to carry a wind load pressure of not less than 20 lbs. per square foot. Minimum supports to be 2" x 2" x 1/4" angles. Provision for expansion to be provided at jambs of louvers up to 26 feet wide. Expansion joints to be approximately 20 feet on centers thereafter. All louvers to be furnished with #2 mesh .047 diameter wire bird screen secured in removable extruded aluminum frames. All louvers to be free of scratches and blemishes, to be given a six minute caustic etch after fabrication and one coat C-S 64 butyrate lacquer.



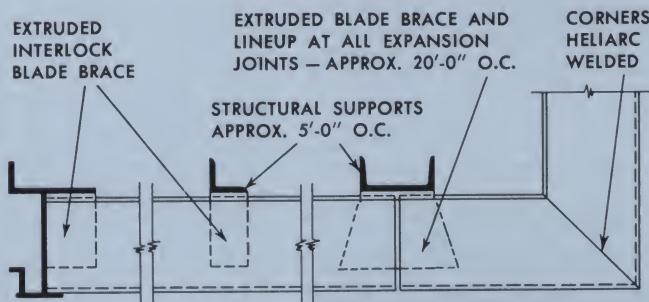
FOR ALTERNATE FRAME
OR BLADE EXTRUSIONS
SEE PAGES 6 AND 7



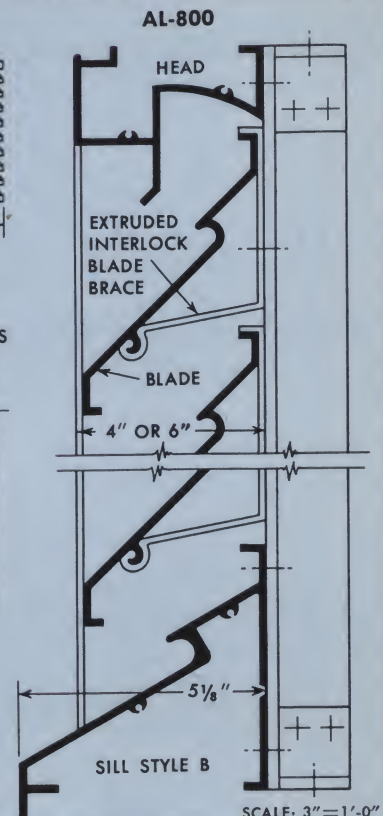
ALL C-S SILL STYLES ARE INTERCHANGEABLE



FRONT ELEVATION



FOR A LARGER MODULE IN THE
HORIZONTAL LINE LOUVER USE
OUR 6 OR 8 INCH BLADE EXTRUSIONS
WITH INTERLOCK BLADE BRACES
SEE PAGE 9



flange frame wall louvers

Z-404, Z-808

features

frames The Z frame is 4 inches deep and is designed to use standard SU101 and SL104 blades. The frame is mitered at corners and rigidly reinforced by corner brackets. Closure plates for head, sill, and jamb are available if desired. Screening may be neatly added on either interior or exterior of frames.

C-S operating louvers as detailed on pages 10, 12, and 14 may be incorporated in our Z-type frame. Specify C-S unit number Z-211, clearly indicating the type operator.

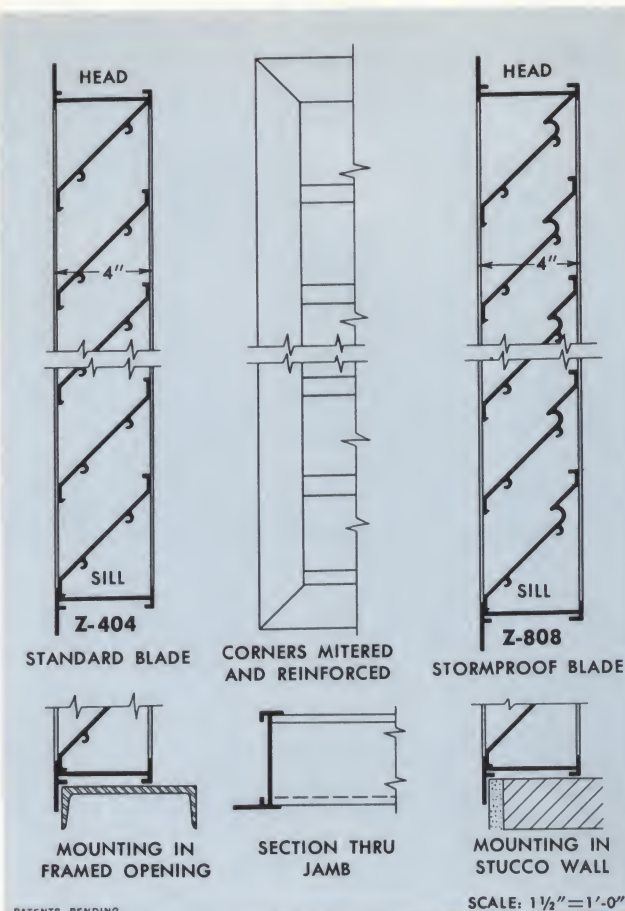
material Extruded aluminum sections, 6063 T5 alloy, minimum .081 gauge with reinforcing bosses.

efficiency The standard Z-404 louver has a free area of 52%. The Z-808 stormproof louver has a free area of 43%. These optimum percentages are based on louvers over 16 square feet with standard spacing as detailed.

suggested specifications

Furnish and install in all openings where so indicated on drawings C-S extruded aluminum louvers Model Z-808 (or Z-404) as manufactured by Construction Specialties, Inc., Cranford, New Jersey (for West Coast use Escondido, California). Frames and blades are to be 6063-T5 alloy, minimum .081 gauge with reinforcing bosses. Z frames to be neatly mitered and reinforced with corner brackets.

(For screen and finish specifications refer to pages 18 and 19).



transformer or sightproof louvers

JP-429, JP-430

features

design The C-S transformer louver is designed as a safety louver for installations of transformer rooms in schools, shopping centers, or industrial buildings. It effectively prevents the insertion of wires, rods, or sticks into the transformer area, yet has good ventilation and weatherproof qualities. This blade is an exceptionally strong extruded shape and may be used for spans up to 84 inches.

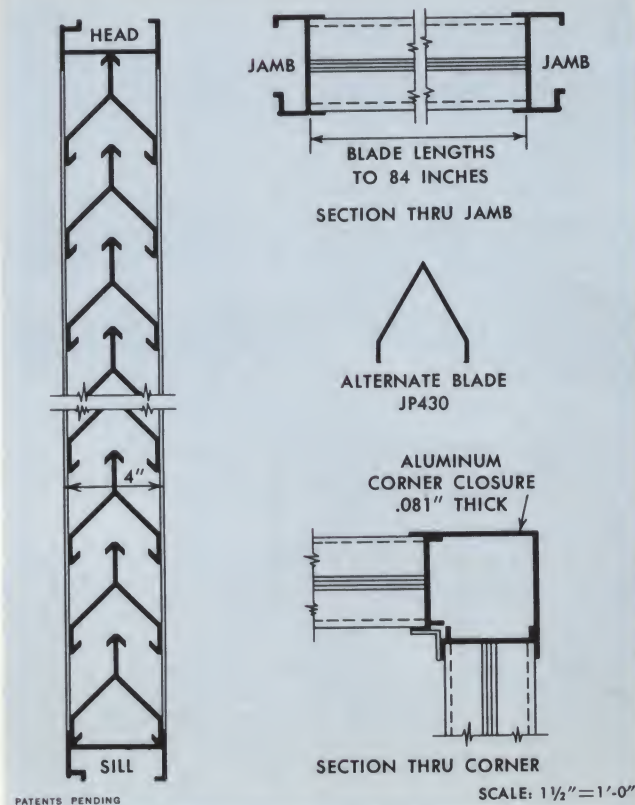
sightproof Both the JP-429 and JP-430 louver blades can be used as sightproof louvers. They have wide applications where both ventilation and visual privacy are required.

efficiency The JP-429 louver has a free area of 40%. The JP-430 provides a free area of 47%.

material Extruded aluminum sections 6063-T5 alloy, minimum .081 gauge with structural reinforcing bosses.

suggested specifications

Furnish and install in all openings where so indicated on drawings C-S extruded aluminum Transformer louvers Model JP-429 (or Model JP-430) as manufactured by Construction Specialties, Inc., Cranford, New Jersey (for West Coast use Escondido, California). Frame and blades to be 6063-T5 alloy minimum .081 gauge with reinforcing bosses. Head, sill and jamb sections to be one piece structural sections with caulking slots and retaining beads. Mullions to be sliding interlocked type with provision for expansion and contraction. (For screen and finish specifications refer to pages 18 and 19.)



air conditioning louvers — 30° blade

LZ-138, AZ-138, LZ-200, AZ-200, LZ-400, AZ-400

features

material Extruded aluminum sections, 6063-T5 alloy, minimum .051 gauge with structural reinforcing bosses.

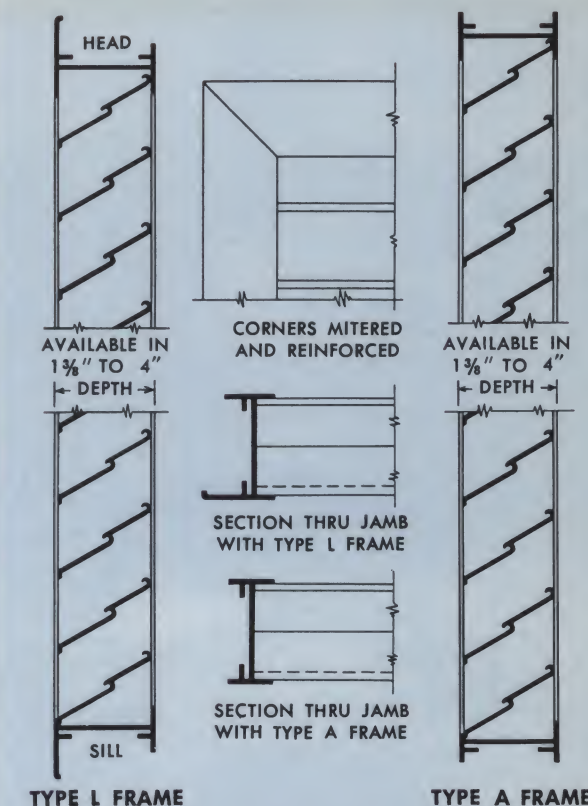
design The AZ and LZ louvers are designed to be a sturdy, good looking air intake for air conditioning units. Blades are set at a 30° angle. Double water bars are incorporated into the extrusion to increase the maximum cfm of air which can be passed without water entrainment. We recommend all louvers over 36 inches wide be supported at rear by a reinforcing bar.

sizes available

model	louver depth inches	frame style	free area
LZ-138	1 3/8"	L	62%
AZ-138		A	
LZ-200	2"	L	62%
AZ-200		A	
LZ-400	4"	L	60%
AZ-400		A	

suggested specifications

Furnish and install in all openings where so indicated on drawings C-S extruded aluminum Air Conditioning Louvers Model (see table) as manufactured by Construction Specialties, Inc., Cranford, New Jersey (for West Coast use Escondido, California). Frame and blades to be 6063-T5 alloy minimum .051 gauge with reinforcing bosses. All blades to be 30° with double water bar. All frames to be neatly mitered at corners and reinforced with corner brackets. (For screen and finish specifications refer to pages 18 and 19.)



PATENTS PENDING

SCALE: 3"=1'-0"

panel wall louvers

A-225

features

design The A-225 louver blades have 1 1/2 inch face which provides a bold horizontal line. The blade also incorporates an additional water bar to increase its stormproof characteristics. Frames are neatly mitered at corners and reinforced with corner brackets. Screens, insulating panels, blank-off sheets or direct connections to air conditioning units may be used.

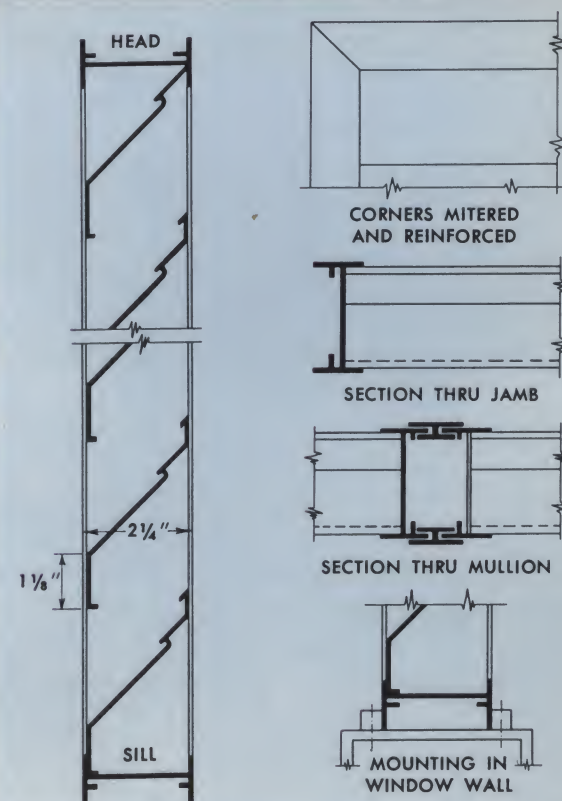
material Extruded aluminum sections 6063-T5 alloy, minimum .064 gauge with reinforcing bosses.

efficiency The A-225 panel wall louver has a free area of 52% with standard spacing as detailed.

frames Both the type A frame and the type L frame are available for use on the A-225 louver. All frames are mitered at corners and reinforced with corner brackets.

suggested specifications

Furnish and install in all openings where so indicated on drawings C-S extruded aluminum Panel Wall Louvers Model A-225 as manufactured by Construction Specialties, Inc., Cranford, New Jersey (for West Coast use Escondido, California). Frames and blades to be 6063-T5 alloy, minimum .064 gauge with reinforcing bosses. All frames to be neatly mitered at corners and reinforced with corner brackets. (For screen and finish specifications refer to pages 18 and 19.)



PATENTS PENDING

SCALE: 3"=1'-0"

interior partition grilles

louvered type

C/S interior louvers are available in 1 • 1½ • 2 • 2¼ • 3 inch depths for interior walls, partitions, and ceilings.

C/S interior louvers feature rugged extruded frames and blades which have clean, crisp, modern lines. They can be supplied in a variety of finishes. All depths are available in sightproof and sound absorbing models. Interior horizontal line louvers are available in widths up to 20 feet without mullions. For 2¼" and 3" louvers contact either your local representative or home office.

types • sizes • model numbers

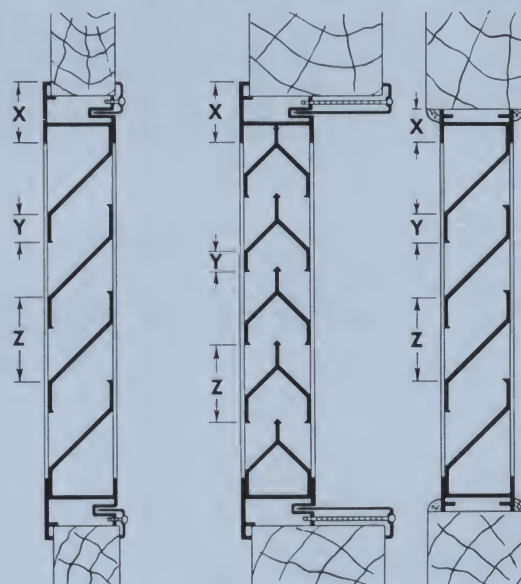
model number	louver depth inches	frame type	frame face X inches	blade face Y inches	blade space Z inches
type D blade					
DA 100	1.000	A	.500	.375	1.000
DL 100	1.000	L	1.125		
DA 138	1.375	A	.625	.500	1.375
DL 138	1.375	L	1.250		
DA 200	2.000	A	.875	.625	1.875
DL 200	2.000	L	1.500		
type N blade					
NA 100	1.000	A	.500	.375	1.250
NL 100	1.000	L	1.125		
NA 138	1.375	A	.625	.500	1.750
NL 138	1.375	L	1.250		
NA 200	2.000	A	.875	.675	2.500
NL 200	2.000	L	1.500		

BLADE AND FRAME STYLES AVAILABLE

TYPE N BLADE
STYLE L FRAME

TYPE D BLADE
STYLE L FRAME

TYPE N BLADE
STYLE A FRAME



MOUNTING WITH
EXTRUDED FRAME

MOUNTING WITH
MOLDING

NOTE: ALL BLADE TYPES AND FRAME STYLES ARE INTERCHANGEABLE

SCALE: 3"=1'-0"

octalinear type

The C-S aluminum octalinear grille offers the architect an entirely new and versatile concept in the field of interior grilles, interior partitions, area dividers, ceiling grilles, and interior high-flow air intakes. The unique design provides exciting opportunity for original architectural expression through the infinite variation of pattern design and a wide choice of finishes.

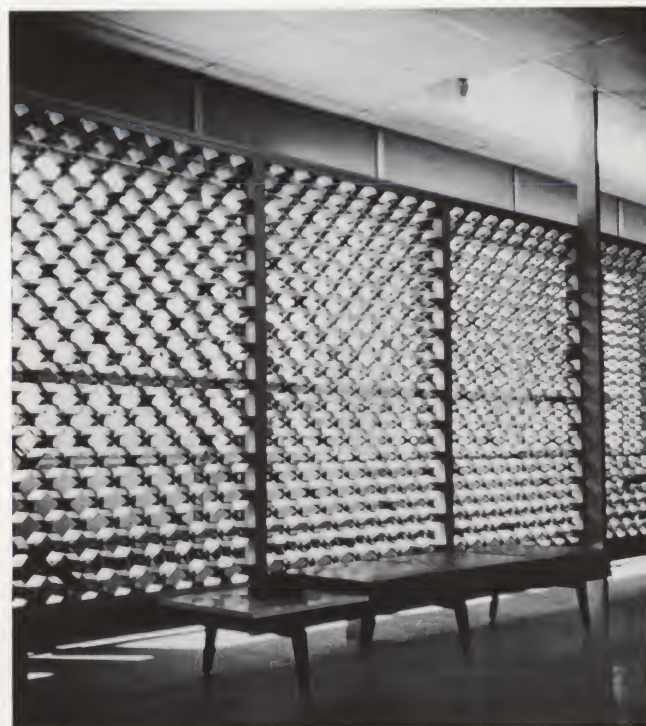
Functionally effective and artistically attractive, the C-S interior Octalinear grille can be tailored to comply with job budget requirements without loss of function or aesthetic value.

design flexibility Variation in size and shape of cell opening from 3" to 8" to allow for module consideration; depth of grille from 1" to 8"; cell wall thickness from .040" to .250"; cell wall spacer thickness from .064" to .250" in a wide variety of extruded shapes to develop a particular screen texture or motif.

strength-rigidity Strong and rigid cellular construction with unique cell wall spacer design assures positive interlocked grille allowing for wide expanse of grille coverage. The area of individual panels is dependent on factors of cell module selected, gauge of material, depth of grille, and availability of supports.

suggested specifications

The infinite variety of grille design, the wide range of finishes, and the structural considerations involved in any partition grille application require experienced, specialized knowledge. C-S maintains a design and engineering staff working exclusively in this field to provide information and assistance to the architect. Product samples and a detailed architect's service file are immediately available through your local C-S representative or an inquiry to our home office. Write for catalog. OG161.



Star Expansion Industries Corporation, Mountainville, N. Y.
C/S Octalinear grille used as a decorative partition wall in entrance lobby of Executive Office Building.

monumental louvers

EH-106, EH-108 STANDARD BLADE
EH-406, EH-408 STORMPROOF BLADE

features

application Construction Specialties, offers two heavy gauge louvers, 6 and 8 inches deep, both designed to answer the high velocity, high efficiency ventilation demands in such installations as cooling towers, tunnel air intakes, and parking garages.

ventilation and air conditioning systems The depth of these louvers allows a large opening which may effectively be made a part of the building design. Their heavy gauge and the size of their sections make them especially desirable where a large module or heavy appearance is required. Exceptional strength, rigidity, and clean-cut line have been designed into these louvers to meet the highest requirements for permanence in buildings of monumental character. In specifying these louvers, an anodized and lacquered finish should be required.

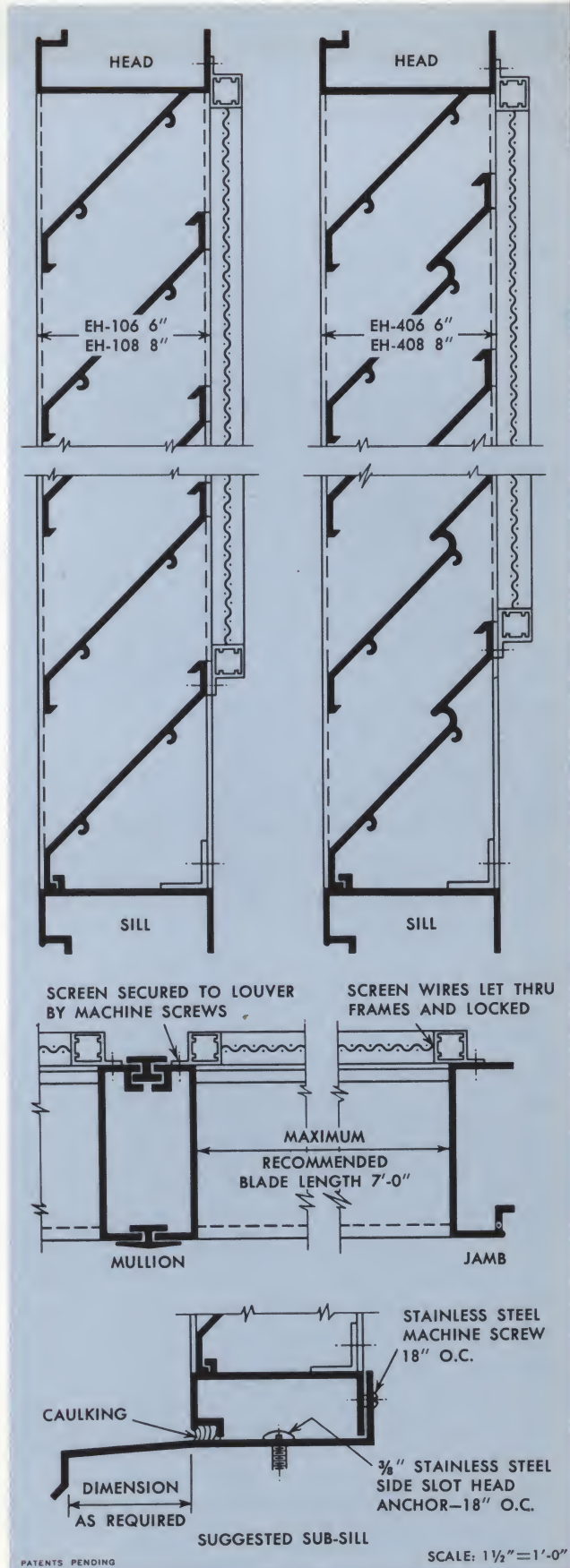
architectural horizontal line Where the architect desires an architectural horizontal line extending the full sweep of the louver in a large module we suggest the use of the EH series, six or eight inch louver blades together with the C-S structural interlocked blade brace anchored to the structural supports at back of louver. The interlocked blade brace effectively supports the blade and provides for expansion and perfect blade line-up. The interlocking action eliminates chatter, deflection and up-lift under the heaviest wind loads. The snap-in design makes for fast easy, accurate field erection. Louvers may be made and installed up to 26 feet wide without joints. (See page 5)

efficiency The standard blades have a free area of approximately 60%; the stormproof units have a free area of approximately 53% with standard spacing as detailed. The larger air opening provided by the six and eight inch louver depth produces better air flow characteristics, materially adding to louver efficiency.

screening C-S monumental bird screens are available with free area from 70% to 82%. Screens are structurally independent and are of heavy gauge double crimp wire. For complete screen information see page 18.

suggested specifications

EH 106 • EH 406 • EH108 • EH 408 Furnish and install in all openings where so indicated on the drawings C-S extruded aluminum louvers. Monumental Type EH 106 (or other desired model) as manufactured by Construction Specialties, Inc., Cranford, New Jersey (for West Coast use Escondido, California). All louvers to be fabricated from extruded aluminum sections 6063-T5 alloy. Blades shall be a minimum .125 gauge with reinforced bosses. Frames and mullions shall be a minimum .140 gauge. All fastenings and anchorage inserts shall be stainless steel type 302. Screens shall be C/S Monumental bird screens, 1 inch mesh .092 double crimp wire let through extruded frame and permanently secured. Frame members shall be 1½ inch extruded box sections minimum .125 gauge mitered at corners and secured by internal corner brackets. All louvers to have a hand rubbed satin finish and be given a one hour .0008 thickness anodize protected by two coats of CS-64 clear, butyrate lacquer. Certification of the quality and thickness of the anodic treatment will be furnished to the architect. Field tests of all anodize shall be made at architect's request. All louvers to be supplied with heavy gauge sills, flashings, and anchorages as detailed.



manual operating louvers

CO-222

features

design The C-S CO-222 operating louver is adaptable for single units or multiple bays and provides dependability and interior neatness. Free area is approximately 59%. All operating parts are concealed and protected against wear, corrosion and abuse. Units may be effectively screened on the interior since there are no projecting operating arms at the rear of the louver. Head, sill, jamb and mullion sections are structural members. Mullions are neatly designed for expansion and contraction. Full size operating samples are promptly available for your inspection by contacting your nearest C-S representative.

concealed operation The operating mechanism uses precision fabricated drive arms and compensating bars concealed in jambs or mullions. These are manufactured of $\frac{1}{8}$ " bar with stainless steel fastenings and nylon bearings at all pivot points. Blades are center balanced for ease of operation, and are equipped with high strength zamac alloy pinions and nylon bearings.

individual operation The model 410 standard operator is a quality unit with a case hardened gear in an aluminum housing with stainless steel driving pins. One operator provides easy operation of up to 80 square feet of louver area. This operator may be mounted on either jambs or mullions, either right or left-hand at whatever height desired. Operators are easily removable for installation or replacement. All operators carry an unconditional guarantee.

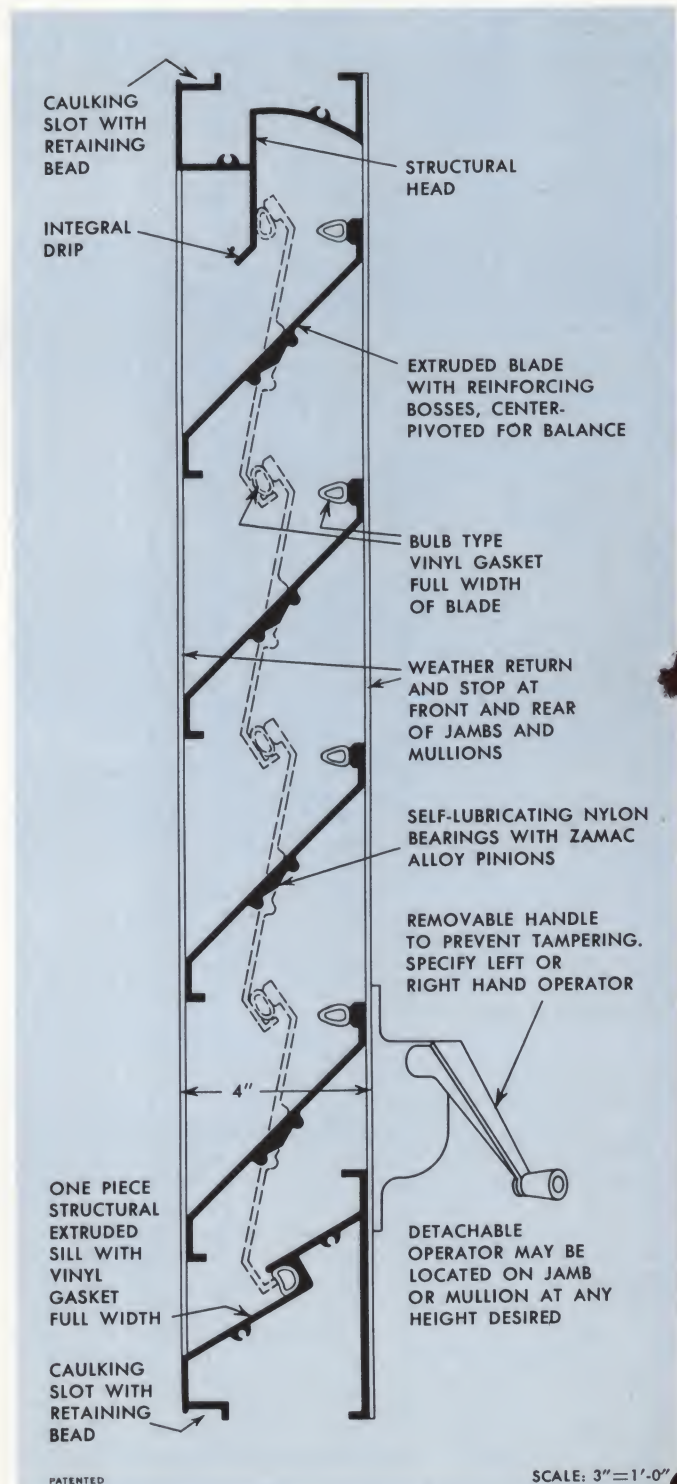
multiple bay operators Where large banks or bays of operating louvers are required, our multiple bay operator MB 1500 is economical, neat and effective. We recommend that the architect draw on the experience of our engineering department when louvers of this type are under consideration.

full width vinyl gasket Each blade and sill is equipped full width with permanent bulb-type vinyl gaskets for draft-free, noiseless closure. Jamb gaskets can be furnished where specified.

economy Our CO-222 operator competes in price with other extruded or sheet metal louvers with old style operators. Ease of installation, particularly where our simplified multiple bay operators are specified contributes additional economies.

suggested specifications

Furnish and install in all openings where so indicated on the drawings, C-S extruded aluminum louvers, Manual Operating Type CO-222, as manufactured by Construction Specialties, Inc., Cranford, New Jersey, (for West Coast use Escondido, California). Frame and blades are to be 6063-T5 alloy, .081 gauge. All blades to be center pivoted with two reinforcing bosses and have zamac alloy pinions operating in self-lubricating nylon bearings. Mullions to be sliding interlock type. Standard operator 410 shall be located as required by the architect. Operator shall be easily removable and shall be unconditionally guaranteed for a period of three years. All louvers to be equipped with concealed drive arms and compensating bars to effect positive closing and positioning of louver blades. All drive arms and compensating bars to be assembled with stainless steel rivets with nylon bearings at all points of movement. All connections between drive arms and operators shall be stainless steel. All louver blades and sills to be equipped with bulb-type vinyl gaskets. Louvers shall have $\frac{1}{2}$ " mesh .047 diameter double crimp wire aluminum bird screens with an extruded aluminum frame. All screens shall be secured to the interior of louvers. All louvers to be free of scratches and blemishes, to be given a six minute caustic etch after fabrication, and one coat of CS-64 butyrate lacquer. An operating sample shall be submitted to architect for approval. All louvers to be supplied with screens and anchorages as detailed.



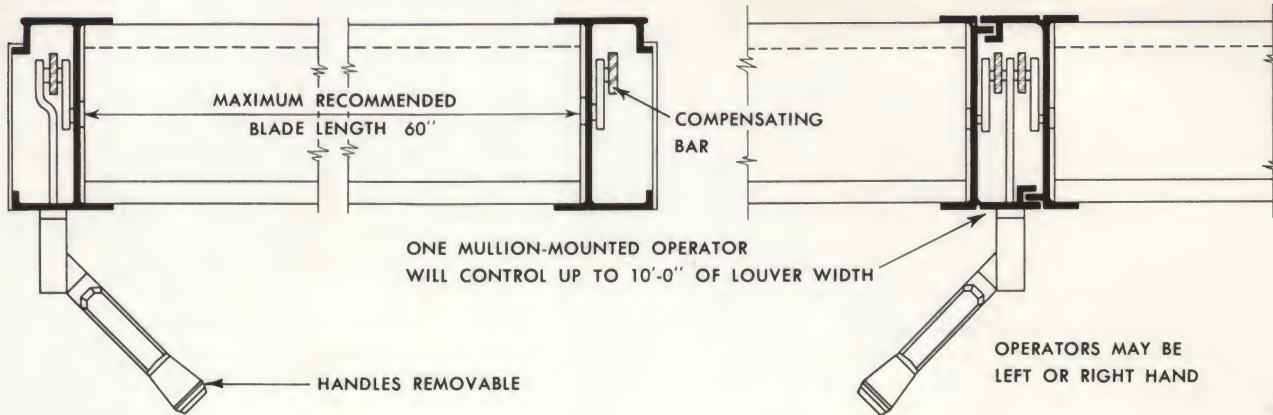
PATENTED

SCALE: 3"=1'-0"

manual operating type individual and multiple bay operators

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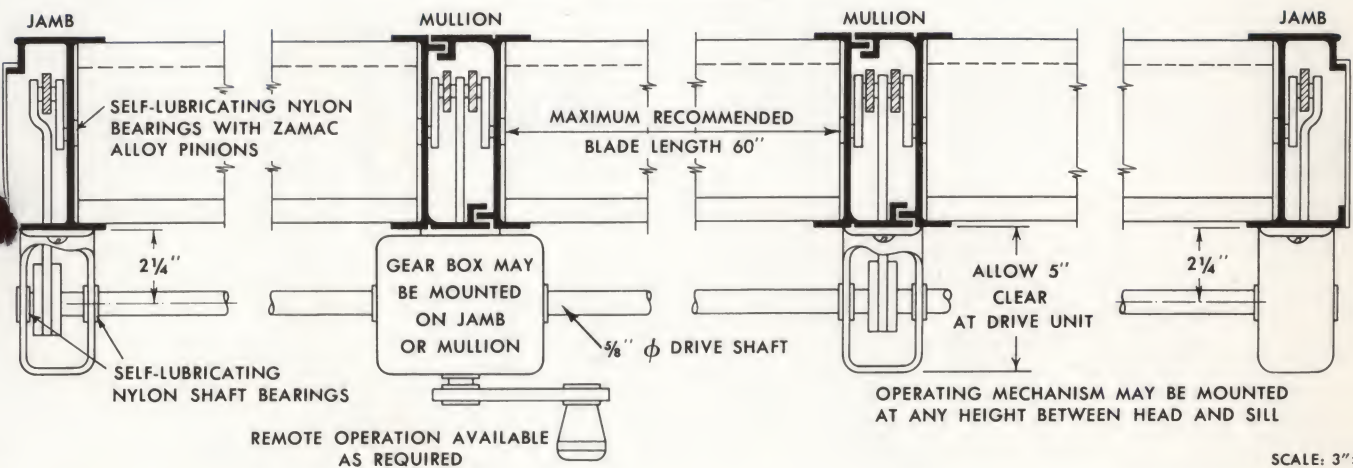
individual operating louvers



SCALE: 3"=1'-0"

multiple bay operation

UP TO TEN LOUVERED UNITS MAY BE CONTROLLED
FROM A SINGLE MANUAL OPERATOR



SCALE: 3"=1'-0"

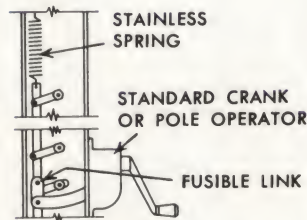
alternate operators

flush type



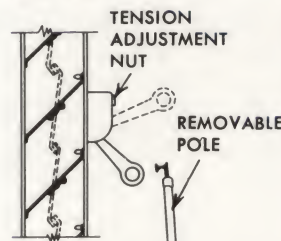
The model FT-431 operator is designed for use where space limitations or appearance considerations are a factor. The 1/2 inch diameter female section of the operator is adjustable from flush to a one inch projection from the face of louver jamb. The operating handle is removable. Specify CO-222 operating louver with FT-431 operator.

fusible link operator



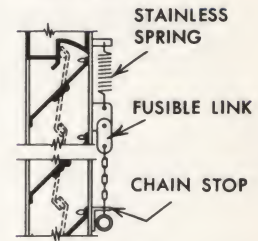
The SF 807 operator utilizes a fusible link mechanism for fire retarding applications. Operation is simple and positive. Louver blades may be positioned normally closed or normally open depending on the application of the louver. Fusible links bear Underwriters' Label. Specify CO-222 operating louver with SF 807 operator.

pole operator



The PT 730 pole operating mechanism utilizes a heat treated cam with an adjustable tension nut to secure louver blades in any position desired. The mechanism is maintenance free, inconspicuous and simple to operate. Specify CO-222 operating louver with pole operator PT 730.

chain operator



The FU 207 is designed for use where economical control is desired for louvers that are located out of convenient reach. One mullion mounted operator will operate up to 10 feet of louver width. Fusible links may be incorporated at no extra cost. Specify CO-222 operating louver with FU-207 operator.

electrical operating louvers

EX-110

features

design The EX 110 electrically operated louvers feature standardized motor operators specifically designed for operation of C-S extruded aluminum louvers. Each installation is shop tested and aligned at the factory before shipment. Motor operators are protected by heavy duty enclosures and are completely pre-wired. All units are easily removable for servicing. EX-110 motor units are supplied for an input of 110/120 volts, 60 cycles, single phase. The motor will operate up to seventy-five square feet of louver area.

multiple bay operation Large banks or groups of louvers require a higher horsepower, high torque motor. One heavy duty motor will operate up to 450 square feet of louver area. These motors are available for 110/120, 60 cycles input. For special applications or unusual current conditions, contact our engineering department.

controls The proper C-S controls should always be specified by number for use with the EX 110 motor operator. C-S Standard controls are shown on opposite page.

Underwriters' Laboratories approved. All C-S standard motor operators and standard controls are Underwriters' Laboratories tested and approved and bear the Underwriters' Label.

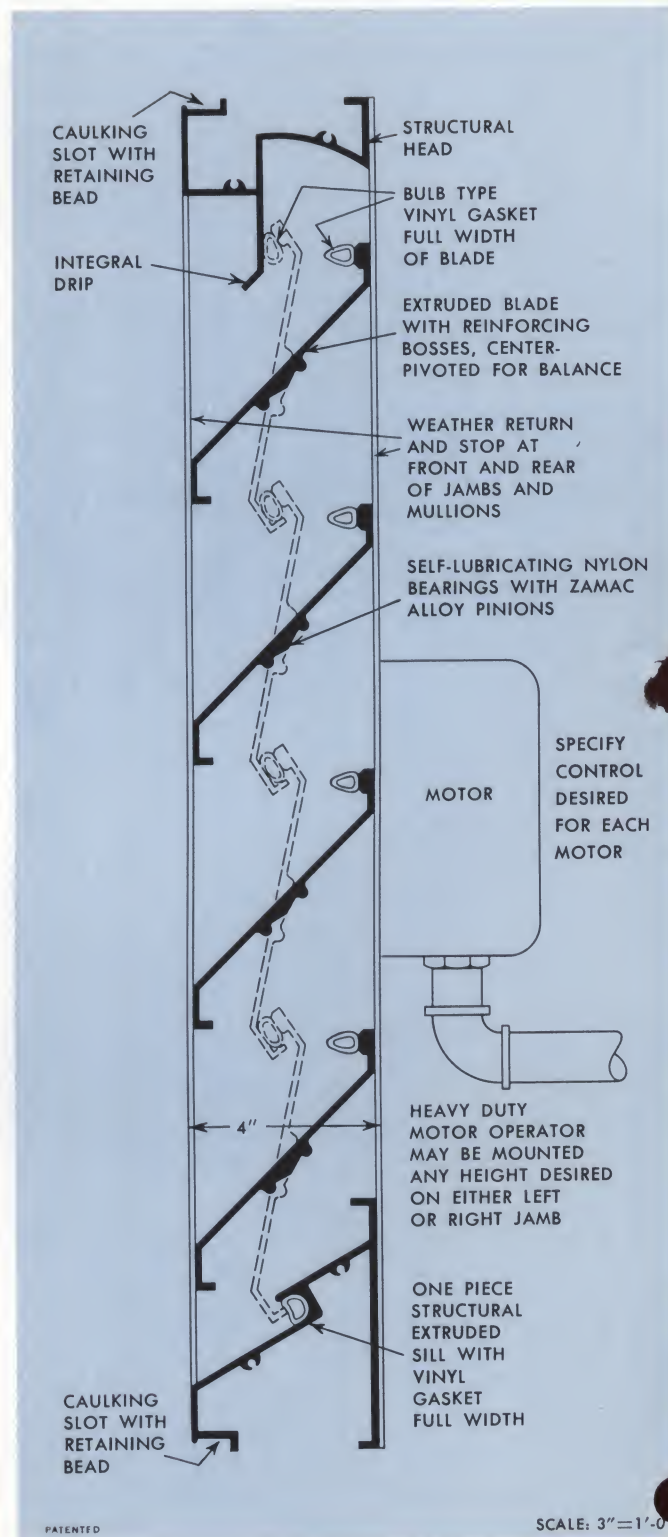
complete electrical louver systems A C-S electrically operated louver system can be designed to operate one or an infinite number of louvers. Our engineering facilities are available to the architect or engineer for complete electrical and architectural details.

suggested specifications

Furnish and install in all openings where so indicated on the drawings, C-S extruded aluminum louvers, Electrical Operating Type EX 110 as manufactured by Construction Specialties, Inc., Cranford, New Jersey (for West Coast use Escondido, California). Frame and blades are to be 6063-T5 alloy, minimum .081 gauge. All blades to be center pivoted with two reinforcing bosses and have zamac alloy pinions operating in self-lubricating nylon bearings. Mullions to be sliding interlock type. Electrical operators shall be supplied completely wired as a unit ready for installation on the louver. Operator shall be electrically driven sealed gear unit equipped with limit switches for full "open," full "close" positioning. Input voltage shall be 110/120, 60 cycle, single phase. Maximum power requirement shall be no greater than 100 VA. Motor shall have protection against sustained overloading. All motor units and controls shall bear Underwriters' Label. Motors shall be completely enclosed in heavy gauge housing and easily accessible for inspection.

Control boxes shall be C-S remote control station MI-10 pre-wired at factory. Control station shall have operating buttons clearly marked "open" and "closed" complete with red indicating lights. Care should be taken that the proper C-S control equipment is specified. (See opposite page). Face plate to have black baked enamel wrinkle finish. Conduit and field wiring by others. All motors and controls shall be unconditionally guaranteed for one year.

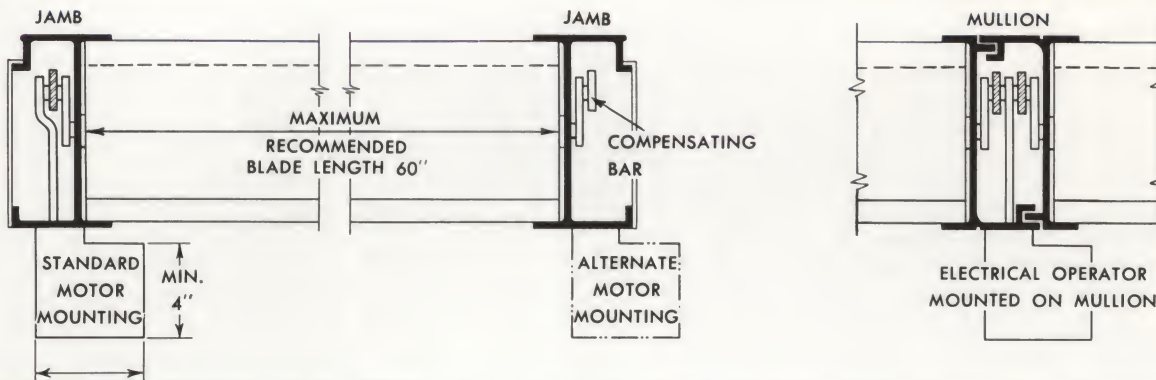
All louvers to be equipped with concealed drive arms and compensating bars to effect positive closing and positioning of louver blades. All drive arms and compensating bars shall be assembled with stainless steel rivets with nylon bearings at all points of movement. All connections between drive arms and operators shall be stainless steel. All louver blades and sills to be equipped with bulb-type vinyl gaskets. All louvers to be free of scratches and blemishes, to be given a six minute caustic etch after fabrication and given one coat of C-S 64 butyrate lacquer. An operating sample shall be submitted to architect for approval. For alternate finish specifications, refer to page 19. For screen specifications refer to page 18.



electrical operating type individual and multiple bay operators

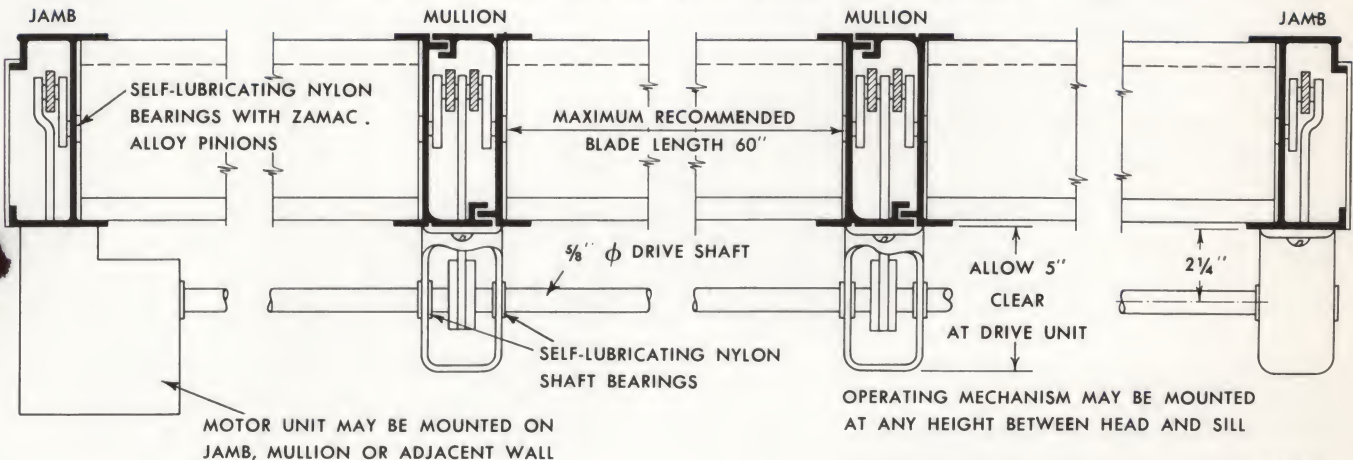
2

individual operating louvers



multiple bay operation

UP TO FIVE LOUVERED UNITS MAY BE CONTROLLED FROM ONE MOTOR



controls

MI-10



The MI-10 remote control station may be mounted in any desired location, either at the louver or a remote location inside of building. Operating buttons with red indicating lights show the position of the louver as "open" or "closed." Limit switches correctly position louver blades. One MI-10 control can be utilized to control any number of EX 110 motors. Control box may be mounted projected or flush with wall.

TC-22



The TC-22 remote control station correctly positions the louver blades with relation to pre-determined thermal limits. The unit is automatic and is shipped complete with thermostat. One unit may be used to control a number of louvers. Each unit is pre-tested at factory. The TC-22 control is ideal for controlling temperatures in pumphouses, transformer rooms, mechanical rooms or where either excessive heat or cold poses a problem.

FC-18



The FC-18 control is a completely automatic cycling unit for use with air intake or exhaust fans. Starting and stopping of fan automatically positions louver blades. A single control box operates up to two separate louvers. The FC-18 does not draw necessary power to operate louvers from fan. No field wiring, adjustment or alignment is necessary. Units are available for standard commercial voltages.

BL-26



The BL-26 is designed to operate up to two EX-110 electric operating louvers where the louvers must be fully open before another device is energized—example, a high output exhaust fan. The contacts of the standard BL-26 unit are rated at 15 amps at 115 volts, 60 cycles. For special applications or ratings consult home office. Control switch (by others) for operating louver should be maintained contact type.

special operating louvers

DL-606 dual combination

The DL-606 dual combination louver consists of any combination of fixed louver, either standard or stormproof, with any C-S adjustable louver assembled at rear of fixed louver. Any C-S manual or electric operating control may be used on the operating section of this combination louver. The most economical combination is the AL-400 or AL-800 Architectural Horizontal Line Louver together with the standard CO-222 Operating Louver. The use of the horizontal line louver offers the architect the additional feature of an uninterrupted line in his exterior design.

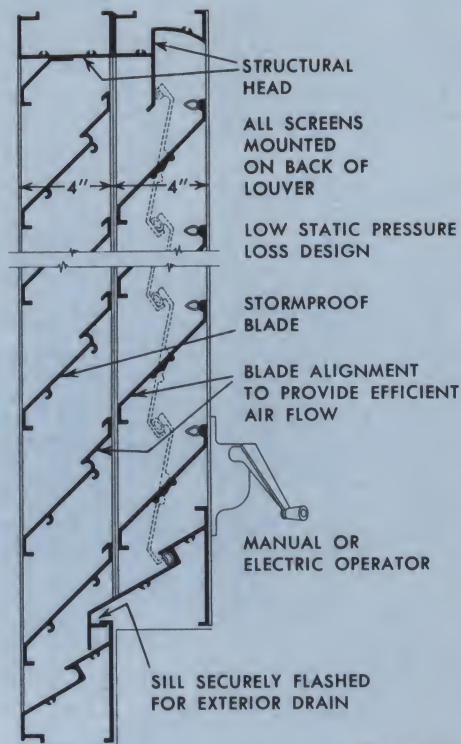
design The DL-606 is designed to give maximum weatherproofness yet provide complete freedom in air handling. The exterior louver allows an architecturally consistent louvered appearance. The effective flashing between the louvers is an important feature.

efficiency The DL-606 has a superior air flow for a louver of this type. The standard blade in combination with the operating louver will provide a free area of 57%, while the use of the stormproof blade gives an efficiency of 48%.

application The C-S dual combination louver is designed for use in power plants, mechanical equipment rooms, auditoriums or installations where continuous air exchange must be made despite weather conditions.

suggested specifications

Specify by number, refer to detailed specifications on page 4 for fixed louvers and pages 10 and 12 for operating louvers. For complete specifications of screens and finishes see pages 18 and 19.



GL-900 90° operating louver

The GL-900 louver offers a full 90° opening where high air velocities and high air volume requirements demand maximum free area with low static pressure drop. Stormproofness is compromised when louver is in full open position. The GL-900 may be operated by any of the C-S manual controls listed on page 10 or any C-S electrical shown on page 12. Operation is identical to either the CO-222 or EX-110 louvers.

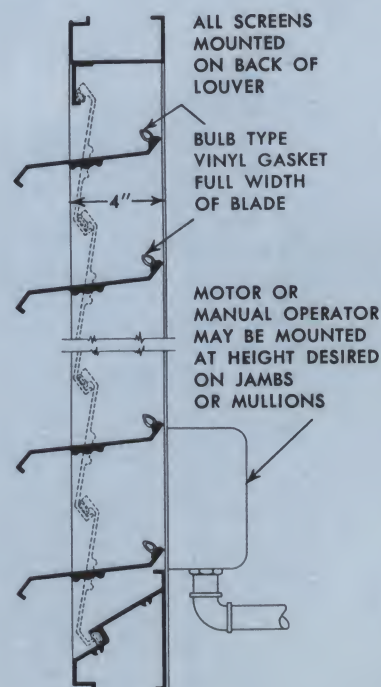
The GL-900 incorporates all the outstanding C-S extruded aluminum operating louver features including bulb type vinyl gaskets, zamac alloy pinions and nylon bearings.

The louver opening for the GL-900 should be not less than 18 inches in height.

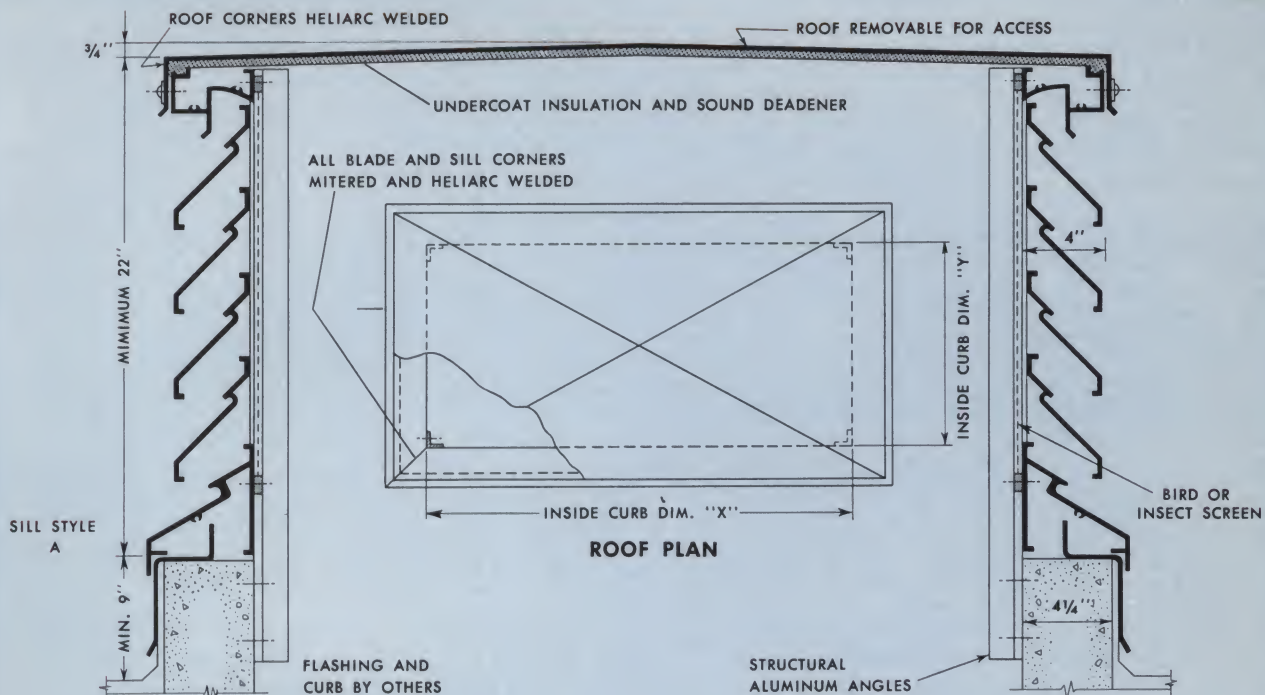
A practical application is the combination of the GL-900 louver with the EX-110 motor and the number FC-18 fan control to handle motor driven exhaust air requirements. The exhaust air provides a weather barrier against rain or wind-driven snow, at all other times the louver is closed.

suggested specifications

Specify the GL-900 90° Operating Louver by number and incorporate detailed specifications for the CO-222 manual operating louver on page 10 or the EX-110 operating louver on page 12 depending on operation desired.



louvered penthouses



F-800 Penthouse

The C-S Extruded Aluminum Penthouse answers the architectural requirement for an efficient, economical, good looking pre-fabricated air intake or air exhaust unit for handling ventilation problems through the roof.

design The C-S Penthouse has a neat, rugged, weatherproof design. Louver blades extend continuously around all four sides, corners are mitered and welded, providing an attractive horizontal line. Blades and sill are made of extruded aluminum sections 6063-T5 alloy, minimum .081 gauge. All fastenings are stainless steel. All roofs are designed for a minimum 30 lb. snow load with proper safety factor. Roofs are removable for access.

economy All-aluminum construction minimizes maintenance and provides a light-in-weight unit that may save on supporting structure. Pre-fabrication eliminates on-the-job construction costs. Initial cost is low due to simplified design, fabrication from standard extrusions, and modern C-S shop procedures.

smoke vents An automatic, positive pop-up roof actuated by a fusible link may be incorporated on any C-S extruded aluminum penthouse so that it becomes an emergency smoke vent. Standard details and specifications are available.

operating penthouses Where air control is desired, operating louvers can be supplied in place of the standard fixed blades. Alternate methods of air control with our penthouse may be secured by the use of the dual combination louver as shown on opposite page, or by automatic dampers secured at the rear of fixed blades.

large size structural penthouses C-S has designed and supplied louvered roof enclosures in very large sizes. For these unusually large penthouses, we use the principle detailed for our Architectural Line Louvers shown on page 4. Structural supporting elements and roof trusses will be engineered to handle specified wind and snow loads. Access doors may be incorporated if required. Large penthouses are completely assembled at the factory, inspected, then dis-assembled for shipment to the job.

For other specialized C-S Roof Penthouses write for the following details:

Dome Skylight Penthouse	ENG-DS-210
Smoke Vent Penthouse	ENG-SV-100
Operating Penthouses	ENG-OP-300
Large Size Penthouses	ENG-MP-620

suggested specifications

Furnish and install where so indicated on drawings, C-S Penthouse F-800, as manufactured by Construction Specialties, Inc., Cranford, New Jersey, (for West Coast use Escondido, California). Sill, blades and heads to be fabricated of .081 gauge extruded aluminum sections 6063 T5 alloy. All sills, blades and heads to be continuously heliarc welded at the corners and supported by structural aluminum angles as detailed. All aluminum to have standard mill finish. All fastenings stainless steel. Penthouse shall have one piece weatherproof roof of .081 gauge sheet aluminum reinforced with 2" x 2" x 1/4" angles, 48" o.c. All roof corners to be heliarc welded. Entire underside of roof to be insulated with minimum thickness of 1/4" asbestos membrane coating.

Screens... for suggested specifications see page 18.

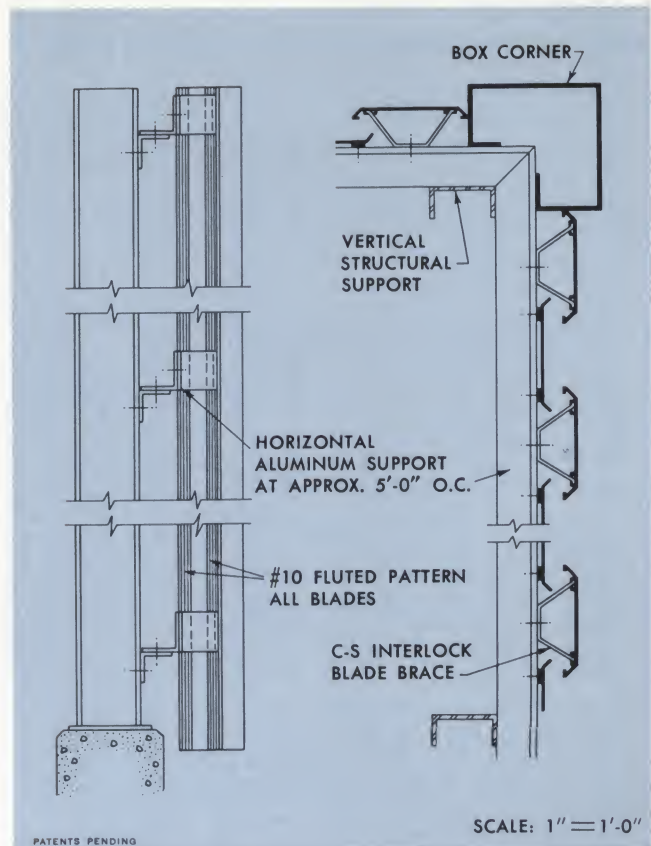
cooling tower screens

JR-555 bold vertical line

The JR-555 is designed to give the architect a high air efficiency cooling tower screen with a vertical line to harmonize with other elements in his design. Heavy gauge blade braces are locked to blades 5'0" on centers to secure them rigidly in position. Blade spacing may be varied to meet the problems of free area, vision screen, and match to adjacent siding. Vertical supports may be steel or aluminum. Spacings of vertical supports may be varied by adjusting the design of the aluminum horizontal structural member to the required span.

suggested specifications

Furnish and install C-S Cooling Tower Screen Model JR-555 as manufactured by Construction Specialties, Inc., Cranford, New Jersey (for West Coast use Escondido, California). Blades to be fabricated from extruded aluminum sections 6063-T5 alloy, minimum .081 gauge. All blades to be secured to horizontal structural supports by heavy gauge extruded aluminum interlock blade braces approximately 5 feet on centers. Blades shall have no horizontal joints in sections less than 25 feet high. Expansion and contraction joints shall be maintained in perfect alignment by use of internal line-ups. All blades to have a #10 pattern face on all exposed face surfaces. There shall be no exposed fastenings visible in the exterior face of the completed installation. Blades to be free of scratches and blemishes and to be given a six minute caustic etch and one hour .0008 thickness anodize protected by two coats of CS-64 butyrate lacquer. Certification of the quality and thickness of the anodic treatment shall be furnished to the architect. Field tests of all anodize to be made at architect's request. For alternate color finish specifications, see page 19.



BG-335 thin vertical line

The C-S thin vertical line Cooling Tower Screen offers the Architect a very economical vertical line cooling tower screen which combines a complete vision barrier with exceptionally high free area. The subtle vertical line creates an attractive texture economically adaptable to clear anodize finishes or epoxy color coatings.

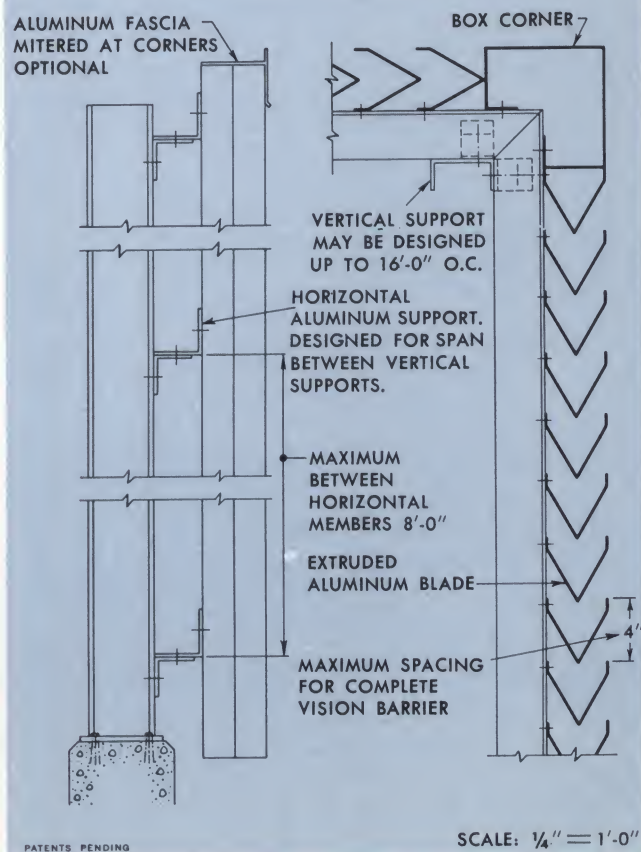
Basic in the economy of this screen is the design adjustability in the structural support system and the good span characteristics of this V blade. Vertical supports may be spaced up to 16 feet on centers and supplied in either steel or aluminum.

The BG 335 can be supplied with an attractive fascia member which caps and gives a finished appearance to the completed installation.

Samples and engineering data are available to the architect on request.

suggested specifications

Furnish and install C-S Cooling Tower Screen Model BG 335 as manufactured by Construction Specialties, Inc., Cranford, New Jersey (for West Coast use Escondido, California). Blades to be fabricated from extruded aluminum sections 6063-T5 alloy, minimum .081 gauge. All blades to be secured to structural supports by type 302 stainless steel fastenings. Blades shall have no horizontal joints in sections less than 25 feet high. Expansion and contraction joints shall be maintained in perfect alignment by use of concealed line-ups. Engineering shall be submitted for Architect's approval on vertical and horizontal structural members and blades certifying a minimum 30 pound per square foot wind load. Blades to be free of scratches and blemishes and to be given a six minute caustic etch and one hour .0008 thickness anodize protected by two coats of C-S 64 butyrate lacquer. Certification of the quality and thickness of the Anodic treatment shall be furnished to the architect. Field tests of all anodize to be made at architect's request. For alternate color finish specifications, see page 19.

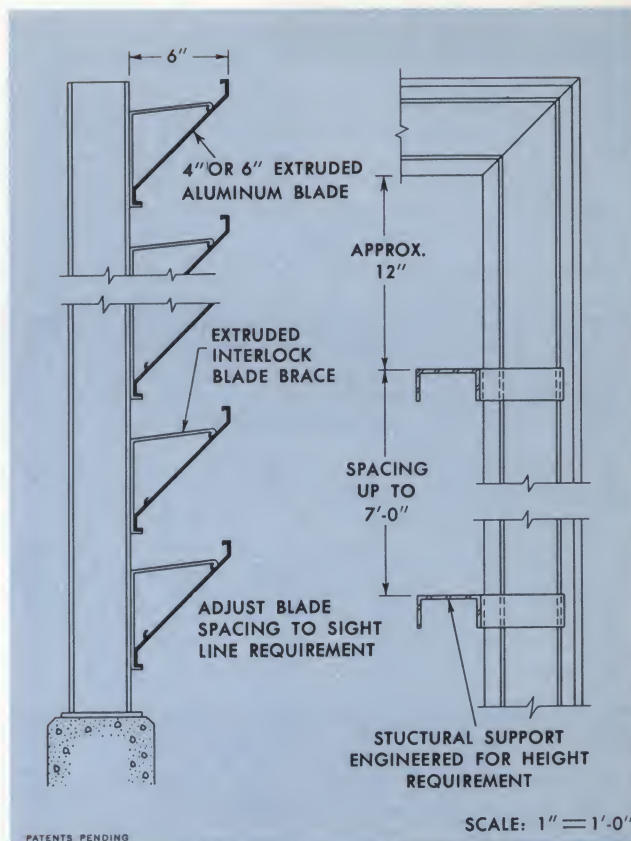


JK-666 horizontal line

The JK-666 cooling tower screen features a continuous horizontal line which the architect may incorporate into his building design. An extruded blade brace is used to support the blades from structural members concealed behind the screen. The extruded blades effectively block all vision through the screen and yet provide an efficient air flow. This design also serves to contain cooling tower water so that exposed surfaces remain clean and unstained. Two blade sizes, four inches and six inches, are available. The six inch blade, detail at right, is particularly economical where a large module is required. Where a small module is desired the JK-444 with a four inch blade spaced six inches on centers is available. Ease of shop fabrication and field erection contribute to the over-all economy of this cooling tower screen.

suggested specifications

Furnish and install C-S Cooling Tower Screen Model JK-666, as manufactured by Construction Specialties, Inc., Cranford, New Jersey (for West Coast use Escondido, California). Blades to be fabricated from extruded aluminum sections, 6063-T5 alloy, minimum .081 gauge. All blades to be supported and lined up by means of heavy gauge extruded aluminum blade braces positively interlocked to each blade and secured to structural angles by type 302 stainless steel fastenings. Structural supports to be designed to carry a wind pressure of not less than 20 pounds per square foot. At corners, blades shall be mitered and continuously heliarc welded. Provision for expansion and contraction shall be made approximately 20 feet on centers. Blades and structural supports to be free of scratches and blemishes and to be given a six minute caustic etch protected by two coats of CS-64 butyrate lacquer. For alternate finish specifications, refer to page 19.

**OP 134 octalinear patterned screen**

The OP Octalinear patterned screen gives the architect an opportunity to give a new look to his cooling tower design. This screen has a maximum free area for air circulation and yet serves as a vision screen from street levels. The standard design, as detailed, is 4 inches deep. It is secured in position by a 4 3/4 inch extruded aluminum channel frame. The strong, rigid cellular construction provides an unusually high strength/weight ratio which reduces structural support requirements. Standard units weigh between 1 and 4 pounds per square foot, depending on module desired.

These screens may be produced with the individual cells set at a desired slope to provide design effect, and to keep cooling tower water from staining the exterior of buildings.

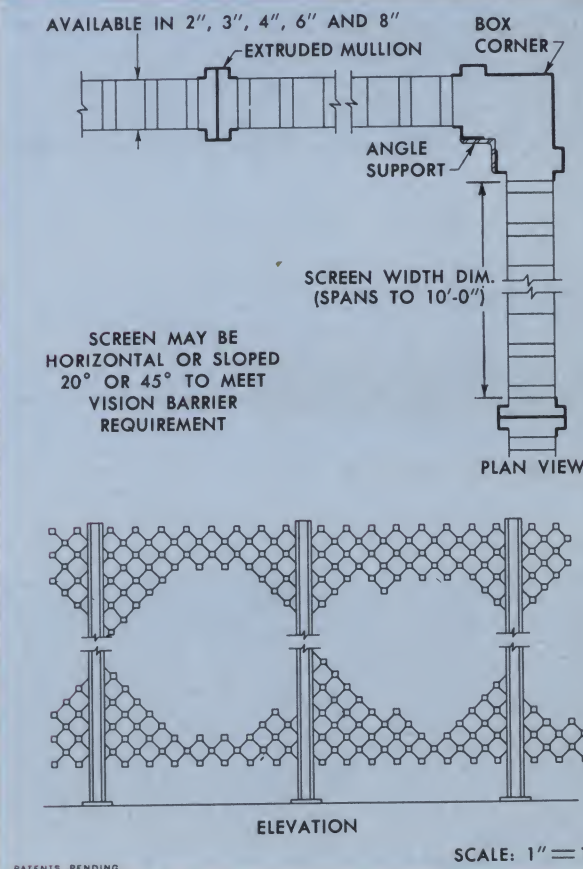
Larger modules in varying depths may be supplied to the architect's design where installations of reasonable size are involved.

The OP 134 octalinear pattern grille is one of an infinite family of textured patterns which may be designed using the components of this C-S screen system.

suggested specifications:

The infinite variety of grille designs, the wide range of finishes and the structural considerations involved in any cooling application requires experienced, specialized knowledge. C-S maintains a design and engineering staff working exclusively in this field to provide information and assistance to the architect. Product samples and a detailed architects service file are immediately available through your local C-S representative or an inquiry to our home office.

Write for catalog. OG161



screens

Construction Specialties features a complete line of protective or decorative screens. Our standard screens are listed below, together with details on free areas, gauges, and framing. Screens other than our standards can be supplied in any procurable material and mesh to the architect's specifications. Where unusually strong, sturdy large size bird screens are required, we suggest our C-S Monumental Bird Screen, detailed below.

insect screens C-S Insect Screen is aluminum, 18 x 14 mesh, .0123 diameter, 5056 clad. This screen has a maximum free area of 60%. Frames are of rolled aluminum, with mitered corners, secured with corner clips, providing an exceptionally strong and neat screen frame. All insect screens and frames may be removed from the louver proper, and all screening may be removed easily from frames. Insect screens may be secured to the interior or exterior by use of clips or sheet metal screws.

bird screens C-S Bird Screens may also be furnished in any procurable material and mesh to the architect's specifications. The following screens are immediately available from stock and are recommended for their appearance and strength in combination with efficient free area:

#4 (1/4") mesh	.047 diameter wire	71% free area
#2 (1/2") mesh	.047 diameter wire	80% free area
#1 1/2 (3/4") mesh	.063 diameter wire	84% free area
#1 (1") mesh	.081 diameter wire	88% free area

All screens fit into extruded aluminum frames mitered at corners and secured with corner locks. Screens are fastened to the louver frame with sheet metal screws. All bird screens may be readily removed from frames and easily replaced.

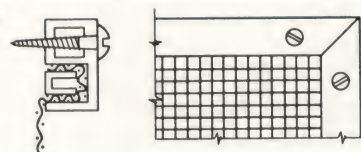
monumental bird screens C-S Monumental Bird Screens are of superior quality and heavy gauge, independently framed in heavy gauge extrusions. They recommend themselves for character, sturdiness of frame and screening, and particular suitability for screening large louver areas. They may be used to advantage apart from louvers.

Screening is of heavy gauge, double crimp wire, each wire let through the extruded frame and permanently secured. These meshes are suggested—others are available on inquiry:

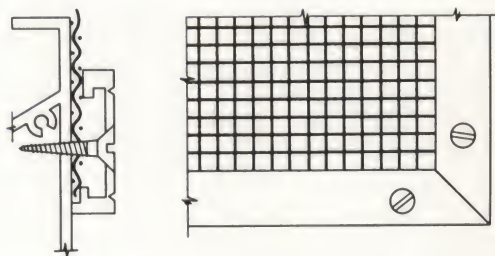
1/2" mesh	.080	Single Crimp Wire	70.6% Free Area
3/4" mesh	.092	Double Crimp Wire	76.9% Free Area
1" mesh	.092	Double Crimp Wire	82.4% Free Area

Frame members are 1 1/2" extruded box sections, mitered at corners, secured by internal corner brackets. Braces may be added. Screen and frames are held by stainless bolts tapped into sub-frame. Samples and cost data on request.

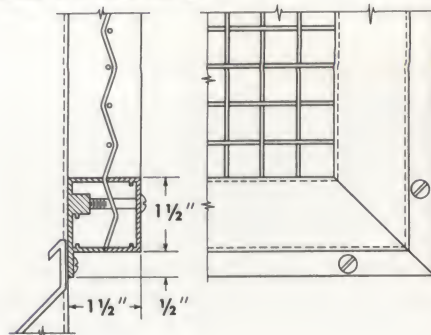
INSECT SCREEN



BIRD SCREEN



MONUMENTAL BIRD SCREEN



anchorage

corrugated buck anchor 2 1/4" wide 4" long. These 12-gauge aluminum anchors are adjustable to meet the brick coursing. They are spaced 16" on centers or a minimum of three per jamb.

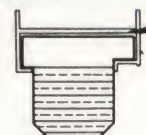
extruded strap anchor This economical anchor fits jambs, head, and sill and leaves a smooth interior surface to the louver frame. It is most valuable where duct connections are to be made to the louver.

clip angle These anchors are 1" x 2" x 1/8" x 2" wide and are expansion bolted to the adjacent structure and then fastened to the louver proper. The anchors should be spaced 24" on centers.

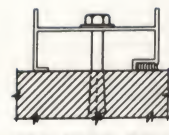
continuous closure angles These angles may be used for jambs, heads, or sills. They are 2" x 1" x 1/8", are expansion bolted to the adjacent structure and then fastened to the louver frame.

expansion bolt Louver jambs may be directly expansion bolted to adjacent masonry. Cadmium plated bolts and aluminum washers with neoprene gaskets should be used.

ANCHORAGE



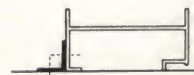
CORRUGATED BUCK ANCHOR



EXPANSION BOLT



EXTRUDED STRAP ANCHOR



CLIP ANGLE OR CLOSURE ANGLE

finishes

mill finish

The natural finish of aluminum as received from the extrusion press has an attractive, pleasing grain. Subsequent weathering grays the metal uniformly. The as-fabricated extrusion provides a

low-cost finish because it requires no special treatment. However, unprotected mill finish will show fingerprints and is susceptible to damage by mortar.

caustic etch and butyrate lacquer

Caustic etch and butyrate lacquer provides a satin finish which combines economy and a long life clear protective coating. The etch is produced by a low cost chemical treatment, well suited to C-S extruded aluminum products. Various degrees of etch are available. The etch not only provides a clear even texture to the aluminum, but is a prerequisite to a proper lacquer bond. CS-64 Butyrate Lacquer is the finest exterior protective lacquer now available. Research laboratory tests reveal it to be con-

siderably superior to a methacrylate lacquer. It has shown itself to withstand the most rugged on-the-job testing, with no visible deterioration for periods of over four years. Detailed specifications, weatherometer test data and test comparisons with methacrylate lacquer are available for review.

As a minimum specification, we recommend: "All aluminum to be free of scratches and blemishes, and to be given a six minute caustic etch with one coat of CS-64 butyrate lacquer."

anodize finishes

Construction Specialties, an Alcoa alumilite licensee, has complete in-plant facilities for clear and color anodizing of individual structural pieces up to 25 feet in length. This electrolytic treatment provides a smooth hard oxide coating that protects surface appearance retaining the natural color and surface texture of aluminum. Anodized surfaces also offer increased resistance to wear, abrasion and weather and are easy to maintain. We recommend a one-hour anodize to give a .0008" coating, having a per square inch weight of 35 mg. All of our anodized work receives two coats of CS-64 butyrate lacquer. It is recommended that anodize treatments be applied to textured pre-treatments as previously discussed. It may be specified numerically as follows:

Caustic Etch and half-hour Alumilite	#204 R1
Caustic Etch and one-hour Alumilite	#215 R1

C-S maintains a quality control on all anodize work and certifies each job in writing as to surface film, thickness, density range and color.

Since anodize coatings are difficult for the architect to check in the field, a written certification on the finish should be required whenever anodize is specified.

suggested specifications

All aluminum shall have a one-hour anodize 215 R1, with two coats of CS-64 butyrate lacquer. Anodic film thickness to be .0008 inches. A written certification as to film thickness, density range, and color analysis shall be supplied. Field tests of all anodize to be made at architect's request.

epoxy color coatings

Construction Specialties has been using and developing epoxy color coatings for more than four years. In C-S Epoxy Coatings the architect has available a complete range of exterior color coatings with a hardness, toughness, mar resistance, and color fastness that closely approaches porcelain enamel at a small premium over ordinary baked enamel paints. Comparative weatherometer salt spray, and hardness test data is available on request. Acceleration and longevity tests, indicate a durability of our modified epoxies in normal atmospheres to be in the range of 20 years. To achieve these results the epoxies must be properly applied, by experienced personnel.

C-S has installed new facilities specifically for the application of high bake epoxy coatings. These include pre-treatment tanks, large water-wash spray booths, and a precisely controlled automatic oven with facilities for finishing single pieces up to 28 feet in length. To augment this equipment, elaborate controls and testing procedures are used together with proper instrumentation and trained personnel. It is recommended that the architect use the following specification and see that all the provisions are rigidly observed.

suggested specifications

All louvers (or other C-S product) shall be finished both sides

with an epoxy color coating—color to be selected by the architect. Two (2) 7" x 11" samples on 20 gauge aluminum sheets of the epoxy coating in the approved color shall be furnished to the architect prior to any factory finishing.

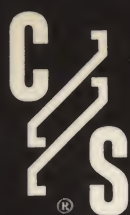
The epoxy shall be of the thermal setting type, minimum baking cycle of 450 degrees for fifteen minutes. Finish coating thickness shall be a minimum of .0015 thickness. All aluminum to be thoroughly cleaned and given a six minute caustic etch and ten minute anodize before application of the color coating. All finishing shall be a continuous operation in the plant of the louver manufacturer. The epoxy shall be modified to give the minimum amount of chalking upon prolonged outdoor exposure and to withstand without breakdown, 1,000 hours salt-spray, and 1,000 hours weatherometer tests. The pencil hardness shall be a minimum of 4H and the flexibility shall be such as to not cause failure under 180 degrees over 1" T radius.

Written certification as to the manufacturer of the coating, the location of the processing, and detailed processing conditions, together with salt-spray, weatherometer, and hardness tests of the coating shall be supplied to the architect at delivery. Field tests of coating thickness and complete curing shall be provided at the architect's request. The louver fabricator shall supply, at job completion, a written two year guarantee against failure of the color finish.

porcelain enamel colors

An almost unlimited selection of colors are available in matte or gloss finishes in vitrious porcelain enamel on aluminum. They are economically practical, as well as highly decorative. Porcelain enamel colors on aluminum resist fading and withstand abuse without chipping or spalling. Wherever porcelain enamel is speci-

fied on C-S products, a detailed specification covering basic alloys, pre-treatment, enamelling, gloss, color and spall testing should be incorporated into the specifications. Full length specifications covering porcelain enamel on aluminum and porcelain samples are available on the architect's inquiry.



sales and engineering representatives

For detailed information and samples of our products, telephone our nearest representative or contact the home office.

ALABAMA

Birmingham
FAirfax 2-1028
Mobile
GReenwood 9-6754

ALASKA

Seattle
MAin 4-1570

ARIZONA

Phoenix
AMherst 6-3697

ARKANSAS

Little Rock
MOhawk 6-6664

CALIFORNIA

Escondido
SHerwood 5-8000
Fresno
ADams 3-3763
Los Angeles
HOLlywood 3-0332
Sacramento
IVanhoe 3-9121
San Diego
SHerwood 5-8000
San Francisco
ATwater 2-0138
Ventura
Miller 3-8265

COLORADO

Denver
AComa 2-7092

CONNECTICUT

Hamden
CHestnut 8-2609

DELAWARE

Wilmington
OLympia 6-8518

DIST. OF COLUMBIA

Washington, D.C.
RAndolph 6-0096

FLORIDA

Jacksonville
ELgin 6-4821
Tampa
WEbster 9-3431
Miami
Hlaleah 8-6621
Tallahassee
2-8745

HAWAII

Honolulu
99-0077

GEORGIA

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PArk 2-4477

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Pocatello
CEdar 2-3306
Spokane
FAirfax 5-0242

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Peoria
673-0545

INDIANA

Indianapolis
MElrose 2-9388
Evansville
GReenleaf 6-5677

IOWA

Des Moines
CRestwood 7-7168
Sioux City
8-4595

KANSAS

Hutchinson
MOhawk 3-9111
Salina
TAYlor 7-6230
Topeka
FLetwood 4-9521
Wichita
AMherst 7-5831

KENTUCKY

Ashland
EASt 4-7030
Louisville
WEst 7-8081

LOUISIANA

New Orleans
822-4550
Shreveport
MElrose 5-7545

MAINE

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MAYfair 3-8221

MARYLAND

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BElmont 5-7781

MASSACHUSETTS

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COmmonwealth 6-5334
Springfield
REpublic 7-8531

MICHIGAN

Detroit
VERmont 7-8836

MINNESOTA

Minneapolis
KELloge 3-5328

MISSISSIPPI

Jackson
FLetwood 4-2346

MISSOURI

Kansas City
EMerson 3-1385
St. Louis
STERling 1-0884

MONTANA

Billings
ALpine 9-3639
Great Falls
GLendale 2-2011

NEBRASKA

Omaha
341-1776

NEW MEXICO

Albuquerque
ALpine 6-9612

NEW YORK

Albany
HEmlock 4-0111
Buffalo
836-4500

Rochester
COngress 6-1949
New York
11272-5200

Syracuse
GRanite 5-8546
Watertown
SUNset 8-4640

NORTH CAROLINA

Charlotte
FRanklin 7-1693

OHIO

Cincinnati
POplar 1-8282
Cleveland
MAin 1-4660

Toledo
CHerry 6-3437

OKLAHOMA

Oklahoma City
JACKson 5-6616
Tulsa
LUther 2-8204

OREGON

Portland
BElmont 4-9731

PENNSYLVANIA

Erie
GLendale 5-2648
Harrisburg
REgent 7-0439
Philadelphia
PENNypacker 5-4727
Pittsburgh
LOcust 1-0744
Scranton
DIamond 3-7746

SOUTH CAROLINA

Charlotte
FRanklin 7-1693

TENNESSEE

Chattanooga
AMherst 7-1131
Knoxville
4-1496
Memphis
FAirfax 3-4425
Nashville
CYpress 7-3595

TEXAS

Amarillo
DRake 2-4893
Corpus Christi
TELmen 5-6259
Dallas
Fleetwood 7-9337
El Paso
PROSpect 2-5274
Harlingen
GARfield 3-6380
Houston
CAPitol 7-9204
Lubbock
PORter 2-5856
San Antonio
TELman 6-0955

UTAH

Salt Lake City
DAvis 8-8534

VIRGINIA

Norfolk
MADison 2-6914
Richmond
MILton 4-4539

WASHINGTON

Seattle
MAin 4-1570
Spokane
FAirfax 5-0242

WEST VIRGINIA

Charleston
DICKens 2-8111

WISCONSIN

Ft. Atkinson
JORDan 3-5279
Madison
ALpine 6-6700

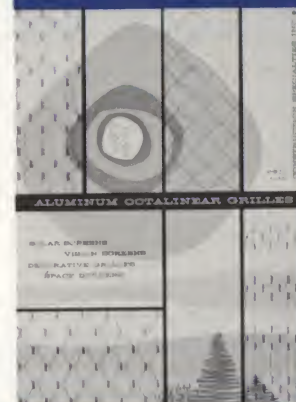
CANADA

Toronto
MElrose 3-6506
Montreal
HUNter 9-8277
Winnipeg
GLobe 2-6720
Halifax
3-7797
Vancouver
BA 5391

OTHER C/S CATALOGS



SWEET'S Architectural File 20d Co
SWEET'S Industrial Construction File 14c Con



SWEET'S Architectural File 19e Con
SWEET'S Industrial Construction File 14c Con



SWEET'S Architectural File 19e Con
SWEET'S Industrial Construction File 14c Con



SWEET'S Architectural File 20d Co
SWEET'S Industrial Construction File 14c Con

Construction Specialties, Inc. is a recognized leader in the design, fabrication and finishing of a variety of extruded aluminum products. We offer our assistance in engineering, design, and sales development without obligation.

CONSTRUCTION SPECIALTIES INC.

55 Winans Avenue, Cranford, New Jersey
West Grant Street, Escondido, California

BRIDGE 2-5200
SHerwood 5-8000

In Canada: CONSTRUCTION SPECIALTIES, LTD.

Box 52, Downsview P.O., Toronto, Ontario

MElrose 3-6505

C-81-1160 • print • S.A.



EXTRUDED
ALUMINUM

door

LOUVERS

CONSTRUCTION SPECIALTIES, INC.

IN EXTRUDED ALUMINUM SUPERB QUALITY

RUGGED CONSTRUCTION COMPETITIVELY PRICED

The new C/S louver is a precision engineered product which is neat, attractive and practical. It is competitive with sheet metal assemblies yet has many attractive qualities available only in an extrusion. C/S mass production facilities make possible off-the-shelf shipment and stock item pricing.

Two blade styles and two frame sizes simplify door louver selection. The **A** frame louver uses traditional wood moulding. The **L** frame louver is supplied with a matching extruded trim frame which quickly and securely clamps the louver in the door opening.

TECHNICAL DATA

material: Fabricated from extruded aluminum sections, 6063-T5 alloy, minimum 16 B&S gauge. Reinforcing bosses and returns are provided on all blade and frame members. All fastenings are aluminum or stainless steel.

frame members: The type **A** frame is designed for use where the architect desires to anchor the louver by means of a moulding. The type **L** frame is designed to trim the exterior of the opening without the use of exposed fastenings.

anchorage: Each C/S type **L** frame door louver is shipped with an extruded interior trim frame which matches the exterior trim member. Louvers are fabricated with an integral locking arrangement that serves to positively and permanently clamp the louver in the door opening. A minimum of effort is required to mount the louver and a neat, finished appearance is provided on both faces of the installation.

finish: The standard C/S door louver finish is a caustic etch plus two coats of C/S 64 butyrate lacquer. Alternate finishes in mill finish, anodize coatings, zinc chromate prime coat, or baked enamel colors are available on specification. Stock baked enamel finish coatings are beige, matte black, light gray and light green.

efficiency: See back page for engineering data.

SUGGESTED SPECIFICATIONS

Furnish extruded aluminum Door Louvers Model (specify frame and blade style from table) as manufactured by Construction Specialties, Inc., Cranford, New Jersey (for West Coast use Escondido, California). All blades, frames and trim members to be 6063-T5 alloy, minimum 16 B&S gauge. All fastenings to be stainless steel or aluminum. A separate adjustable trim member shall be supplied to securely and neatly clamp louver in opening. Interior trim frame to be secured by counter-sunk Jackson head screws. All frames and trim members to be mitred at corners and rigidly secured by corner brackets. Complete assembly to have a caustic etch and two coats of C/S 64 butyrate lacquer (or other finish).

For economy we suggest the architect list C/S stock size door louvers in his door schedule.

N blade' L frame

louver model number	louver width, inches	louver height, inches	free area, square inches	louver depth, inches	X frame face, inches	Y blade face, inches	Z blade space, inches
NL-8-A	12	8 $\frac{7}{8}$	42	1.375	1.250	.500	1.750
NL-8-B	16	10 $\frac{3}{8}$	77	1.375	1.250	.500	1.750
NL-8-C	18	12 $\frac{3}{8}$	110	1.375	1.250	.500	1.750
NL-8-D	20	14 $\frac{1}{2}$	149	1.375	1.250	.500	1.750
NL-8-E	22	15 $\frac{7}{8}$	193	1.375	1.250	.500	1.750
NL-8-F	26	17 $\frac{7}{8}$	242	1.375	1.250	.500	1.750

▲ door opening size should be $\frac{1}{8}$ " larger, each dimension, than louver size
■ standard blade

N blade' A frame

louver model number	louver width, inches	louver height, inches	free area, square inches	louver depth, inches	X frame face, inches	Y blade face, inches	Z blade space, inches
NA-8-A	12	8 $\frac{3}{8}$	45	1.375	.625	.500	1.750
NA-8-B	16	9 $\frac{3}{8}$	81	1.375	.625	.500	1.750
NA-8-C	18	11 $\frac{1}{8}$	115	1.375	.625	.500	1.750
NA-8-D	20	13 $\frac{3}{8}$	155	1.375	.625	.500	1.750
NA-8-E	22	15 $\frac{3}{8}$	200	1.375	.625	.500	1.750
NA-8-F	26	18 $\frac{1}{8}$	282	1.375	.625	.500	1.750

▲ door opening size should be $\frac{1}{8}$ " larger, each dimension, than louver size
■ standard blade

STOCK DOOR LOUVERS

door thicknesses 1 $\frac{3}{8}$ " to 1 $\frac{3}{4}$ " — specify by model number

D blade' L frame

louver model number	louver width, inches	louver height, inches	free area, square inches	louver depth, inches	X frame face, inches	Y blade face, inches	Z blade space, inches
DL-8-A	12	8 $\frac{1}{2}$	35	1.375	1.250	.500	1.375
DL-8-B	16	9 $\frac{7}{8}$	62	1.375	1.250	.500	1.375
DL-8-C	18	12 $\frac{5}{8}$	98	1.375	1.250	.500	1.375
DL-8-D	20	14	126	1.375	1.250	.500	1.375
DL-8-E	22	15 $\frac{3}{8}$	158	1.375	1.250	.500	1.375
DL-8-F	26	18 $\frac{1}{8}$	212	1.375	1.250	.500	1.375

▲ door opening size should be $\frac{1}{8}$ " larger, each dimension, than louver size
■ sightproof blade

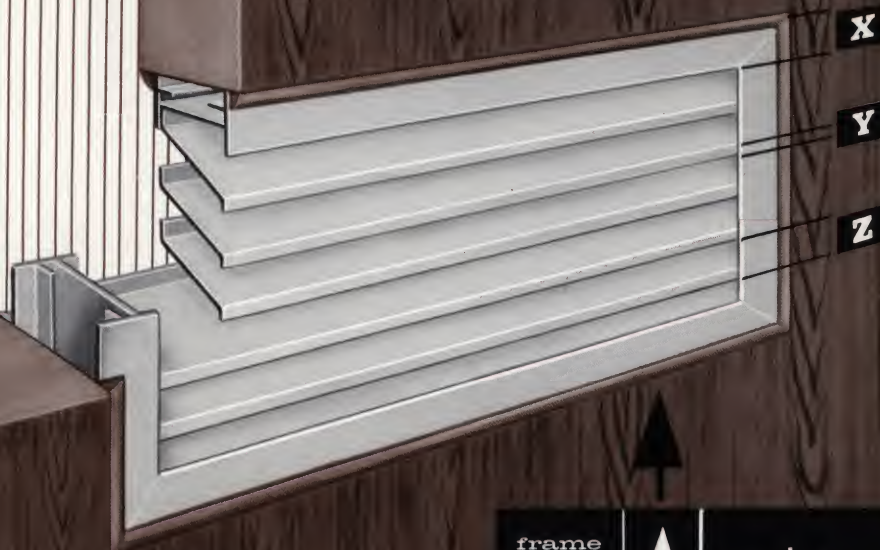
D blade' A frame

louver model number	louver width, inches	louver height, inches	free area, square inches	louver depth, inches	X frame face, inches	Y blade face, inches	Z blade space, inches
DA-8-A	12	7 $\frac{1}{2}$	38	1.375	.625	.500	1.375
DA-8-B	16	9 $\frac{3}{8}$	65	1.375	.625	.500	1.375
DA-8-C	18	11 $\frac{1}{8}$	103	1.375	.625	.500	1.375
DA-8-D	20	13 $\frac{3}{8}$	131	1.375	.625	.500	1.375
DA-8-E	22	14 $\frac{1}{8}$	164	1.375	.625	.500	1.375
DA-8-F	26	18 $\frac{3}{8}$	239	1.375	.625	.500	1.375

▲ door opening size should be $\frac{1}{8}$ " larger, each dimension, than louver size
■ sightproof blade

blade

N



SPECIAL APPLICATION DOOR LOUVERS

Construction Specialties, Inc., has added three new special application louvers to meet the demand for a complete line of attractive, yet economical extruded aluminum door louvers. The door louvers described below are all available in the same frame styles as the standard and sightproof models shown.

soundproof — model SP-8

C/S sound absorbing door louvers are treated with an acoustical barrier bonded to the underside of the standard sightproof D blade. This sound damping barrier effectively reduces transmitted sound. Proper sound isolation adds materially to worker efficiency and is a major factor in reducing office fatigue. Decibel rating information is shown graphically on next page.

Specify: C/S soundproof door louver model SP-8

operating — model OM-9

The C/S operating door louver, in rugged 16 gauge aluminum, has wide application in hotels, hospitals, and office buildings. It features our standard N type blade, and offers a high free area in the open position. All blades are center pivoted on Zamac alloy pinions. A flick of the finger adjusts the louver blade position from fully open to completely closed. An automatic fusible link mechanism to close blades in case of fire is available on specification.

Specify: C/S operating door louver model OM-9

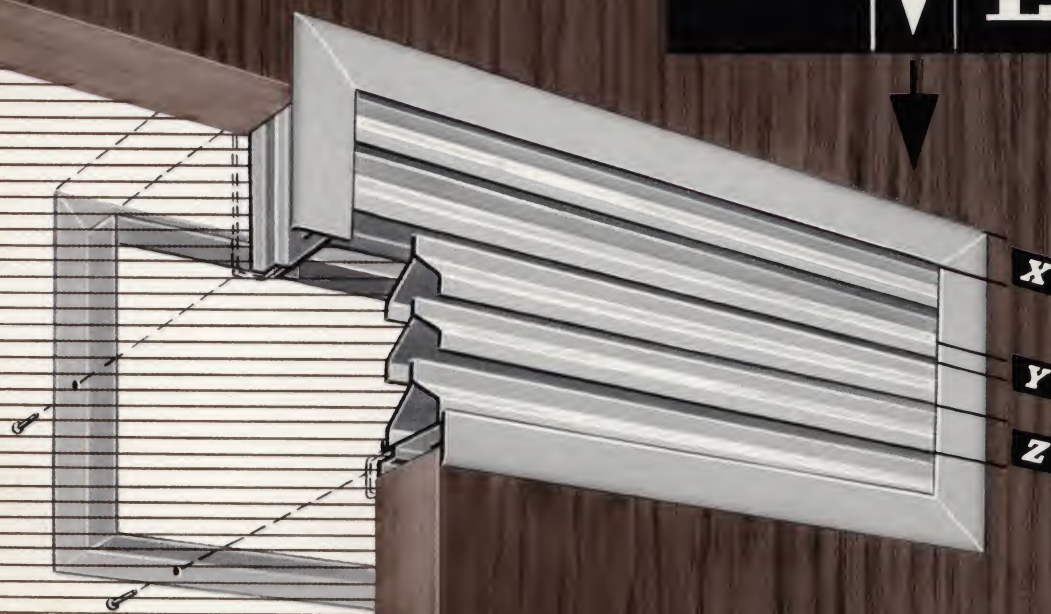
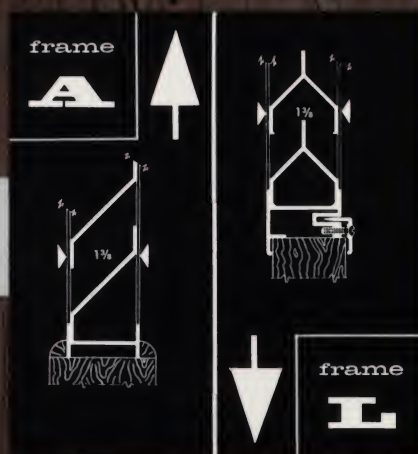
lightproof — model LR-7

The C/S lightproof door louver provides protection against extraneous light leakage into photographic darkrooms, optics laboratories, and optical examining rooms, yet permits free air passage to prevent accumulations of stale or unpleasant air. The lightproof door louver features opposed-channel extruded blades. This louver is furnished in a dull black painted finish for minimum light reflection.

Specify: C/S lightproof door louver model LR-7

CUSTOM DOOR LOUVERS

When ordering, specify frame, blade style, door thickness and finish — clearly indicating door louver opening



blade

D

C/S interior louvers in $1 \cdot \frac{1}{8}$ • $2 \cdot \frac{1}{4}$ • 3 inch depths for interior walls, partitions, ceilings.

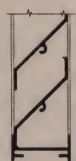
C/S interior louvers feature rugged extruded frames and blades which have clean, crisp, modern lines. They can be supplied in a variety of finishes to match any decor. All depths are available in sightproof and sound absorbing models. Continuous interior horizontal line louvers are available in widths up to 20 feet without mullions. The most economical C/S interior louver is the $\frac{1}{8}$ inch deep louver. We suggest the architect specify this depth whenever possible.

TYPES AVAILABLE

standard N blade

in $1 \cdot \frac{1}{8}$ • $2 \cdot \frac{1}{4}$ • 3 inch depths

The **N** blade with its traditional louver shape permits a high rate of air exchange. Operating interior louvers using the **N** blade are available in the $\frac{1}{8}$ inch depth.



N blade
A frame



N blade
L frame

sightproof D blade

in $1 \cdot \frac{1}{8}$ • $2 \cdot \frac{1}{4}$ • 3 inch depths

The **D** blade is sightproof, providing complete privacy with excellent ventilation characteristics. Its double leg construction produces a very rigid blade which withstands hard usage.



D blade
A frame



D blade
L frame

air conditioning 30° blade

in $1 \cdot \frac{1}{8}$ • 2 inch depths

The air conditioning 30° louver has wide applications where a very high rate of air exchange is required. It is ideal for air handling grilles in auditoriums, theaters, arenas and schools. The air conditioning blade is fabricated from .051 gauge extruded aluminum sections and the blades are set at a 30° angle to give a high free area with a low static pressure loss.

The air conditioning louver as made by C/S makes an unusually good looking and sturdy interior louver.



30° blade
A frame

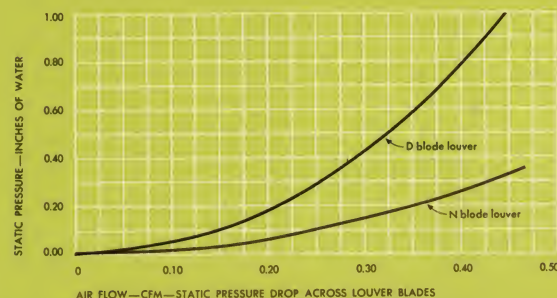


30° blade
L frame

ENGINEERING DATA

The following information has been obtained for Construction Specialties, Inc., by the Texas Engineering Experiment Station, College Station, Texas. Complete analytical reports are available to the architect. These reports describe thoroughly the testing methods and equipment used as well as the results shown here.

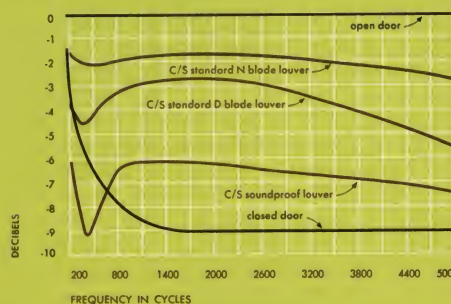
CFM static pressure characteristics



D blade		N blade	
CFM	static pressure	CFM	static pressure
60	.02	110	.02
118	.06	175	.05
165	.13	230	.08
225	.25	290	.13
285	.40	340	.18
340	.56	400	.25

CFM/thousands per square feet of louver face area
static pressure/inches of water

noise control data



CPS	coefficients									average attenuation factor
	200	800	1400	2000	2600	3200	3800	4400	5000	
N blade	5	8	6	6	6	7	8	11	16	8
D blade (stand-ard)	25	20	16	16	18	24	30	36	42	25
D blade (sound-proof)	50	51	50	51	52	55	57	59	62	54

CONSTRUCTION SPECIALTIES, INC.

sales and engineering representatives in all principal cities

plants: 55 Winans Avenue, Cranford, New Jersey • BRidge 2-5200
West Grand St., Escondido, California • SHerwood 5-8000

in Canada: Construction Specialties, Ltd.
Box 52, Downsview P.O., Toronto, Ontario • MElrose 3-6505

see
louver catalog
or sun control
catalog in Sweet's
for phone of
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representative



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6c
CO

BRICK SIZE VENTS

in cast aluminum

construction specialties, inc.

1961

applications

- roof spaces • crawl spaces • pipe tunnels
- hung ceilings • bath rooms • kitchens
- boiler and incinerator rooms • bank vaults
- unexcavated areas • fuel oil vents

air conditioning intake or exhaust

C-S Cast Aluminum Brick size vents are the ideal answer to air intake or exhaust for air conditioning units where the architect desires a rugged vent which will neatly fit into the exterior wall module. C-S Brick Size Vents are approved for use by major air conditioning manufacturers.

certified tests Laboratory tests made by Texas Engineering Experimental Station are available on C-S Brick Size Vents which determine the CFM static pressure drop characteristics and the maximum CFM of air which can be passed without water entrainment.

models

standard brick C-S standard brick size vents are available in cast aluminum, cast bronze or cast iron. The dimensions of the C-S standard brick size vents conform to those of standard brick.

jumbo brick C-S jumbo brick size vents are modular units for use with jumbo brick.

modular block C-S modular block size vents are modular units for use with either cinder or concrete block construction and conform to block coursing.

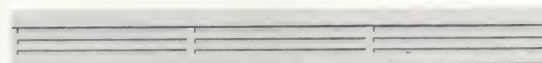
fuel oil vents C-S fuel oil vents are modular brick size units designed and approved for use as ventilators for fuel oil and volatile storage tanks.

The 2B-OV2 is furnished with standard pipe threading for a 2" vent pipe connection. The 2B-OV3 is furnished with a 3" vent pipe connection.

sizes available

sizes available		dimensions, inches		
model	modular size	width	height	depth
standard brick				
1B	one brick	8	2¼	4
2B	two brick*	8	4⅞	4
4B	four brick*	16½	4⅞	4
6B	six brick*	16½	7¾	4
9B	nine brick*	25	7¾	4
1WB	two brick	16½	2¼	4
3WB	three brick	25	2¼	4
4VB	four brick	5	16½	4
6WB	six brick*	25	4⅞	4
RB-1	roman brick	12	1⅝	4
NB-2	norman brick*	11½	5	4
jumbo brick				
1JB	one jumbo*	12	2¾	4
4JB	four jumbo*	16½	6	4
modular block				
MBL-1	one-half block*	15⅝	3⅞	4
MBL-2	standard block*	15⅝	7⅞	4
MBL-6	jumbo block*	16½	7¾	4
fuel oil vents				
2BOV2	2" pipe connection	8	4⅞	4
2BOV3	3" pipe connection	8	4⅞	4

modular brick size vents



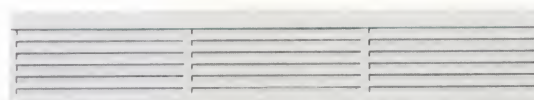
3WB



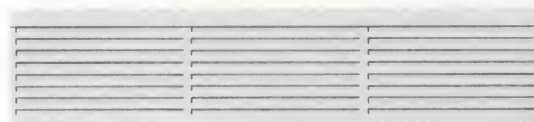
2B *



6B *



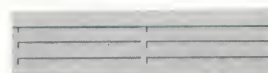
6WB *



9B *



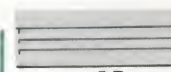
4B *



1JB (jumbo)



1WB



1B



4VB

modular block size vents



MBL-1 *

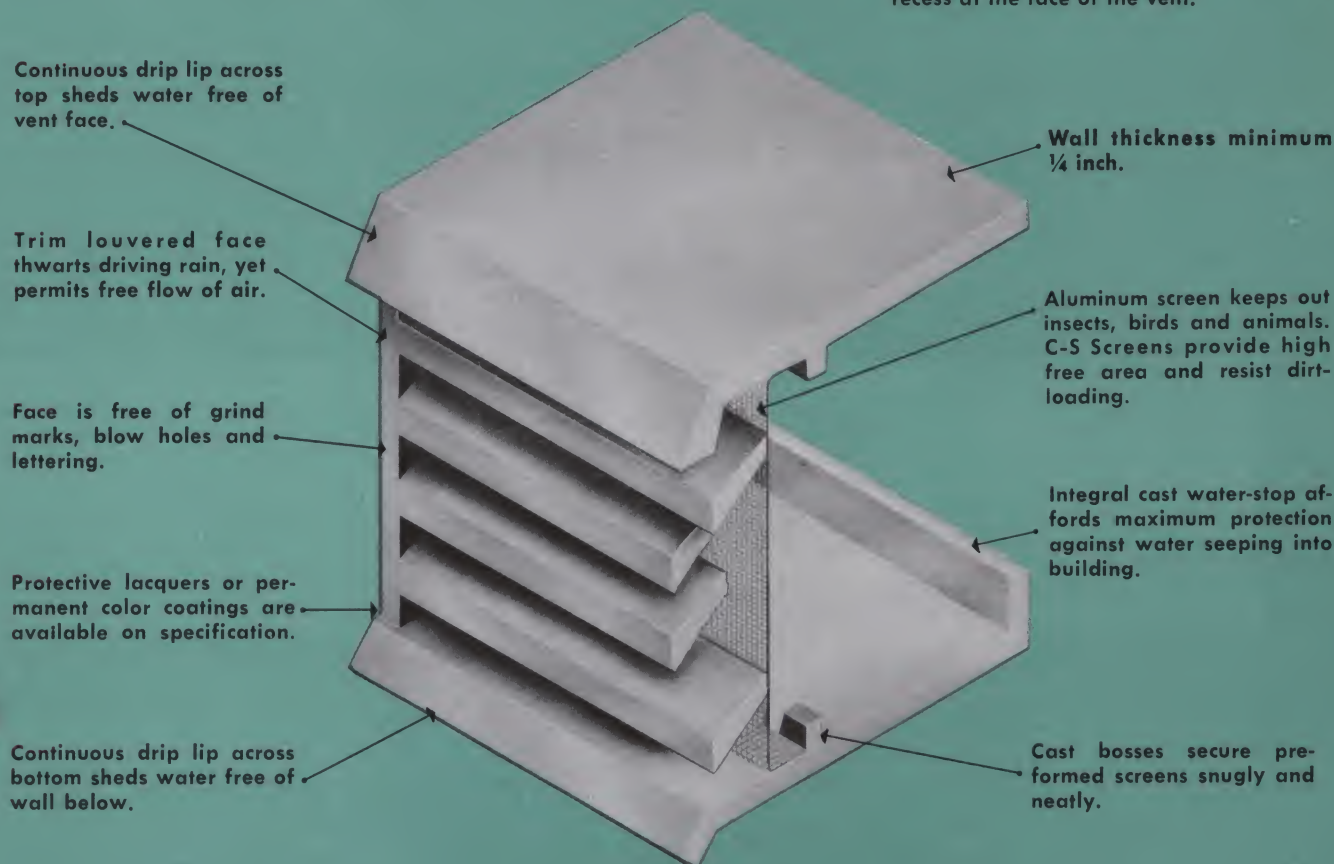


MBL-2 *

*available with exterior operator or fusible link see page four

All C-S Cast Aluminum Brick Size Vents and screens comply with F.H.A. requirements as outlined in regulations governing "Condensation Control".

C-S Fuel Oil Vents feature a removable 20 mesh stainless steel screen mounted in a recess at the face of the vent.



screens and finishes

screens

All C-S Cast Aluminum Brick Size Vents are supplied with 8 x 8 mesh .020 diameter, 5056 clad aluminum wire screening unless otherwise specified. The screen has optimum free area and will exclude birds, animals and most insects while being resistant to dirt and dust loading.

C-S Fuel Oil Vents feature a removable 20 mesh stainless steel screen mounted in a recess at the face of the vent.

finishes

Unless otherwise specified, all C-S Cast Aluminum Brick Size vents are supplied with standard, unmarred face finish. Alternate finishes which the architect may specify:

- a Satin sandblasted finish with two coats of butyrate lacquer.
- b Alumilite finish with two coats of butyrate lacquer.
- c Permanent epoxy base coatings in wide range of colors to the architect's requirements.

suggested specifications

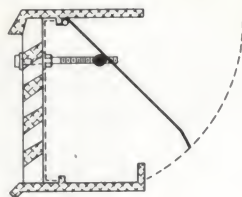
Furnish and install where so indicated on drawings C-S Cast Aluminum Brick Size Vents, Model 4-B, 16½ x 4⅞ x 4 inches, as manufactured by Construction Specialties, Inc., Cranford, New Jersey; Escondido, California. All vents are to have standard C-S unmarred face finish, free of grind marks and blow holes. All vents are to be supplied with 8 x 8 mesh, .020 diameter, 5056 clad aluminum wire screening, pre-formed and fitted so as to be neatly secured behind louvers. All vents are to be furnished complete with 24 gauge galvanized iron ducts per dimensions shown, and complete with positive closing, manually operated register grilles with lock device on inside faces.

Note: Change C-S model number and size, and specification on face finish, duct extensions and grilles, per your design requirements. Cast Aluminum brick vents will be furnished unless cast iron or cast bronze is clearly specified.

operating brick size vents

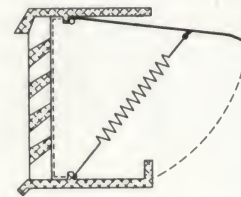
exterior operator

The C-S Flush Face Exterior Damper Control or Fusible Link Damper Control is available for model 2B, 4B, 6B, 9B, 6WB, 1JB, 4JB, MBL-1, MBL-2 and MBL-6 brick or block size vents. The C-S exterior operator is neat, unobtrusive and tamperproof. It is an economical all-aluminum unit which is controlled by a removable key-type operator. Specify C-S Flush Face Exterior Damper Control with key-type operator.



fusible link

The fusible link damper control is supplied with a 160° fusible link. Operation is instant and positive. Specify C-S fusible link operator FU 160°. If other thermal rating link is required specify necessary temperature.



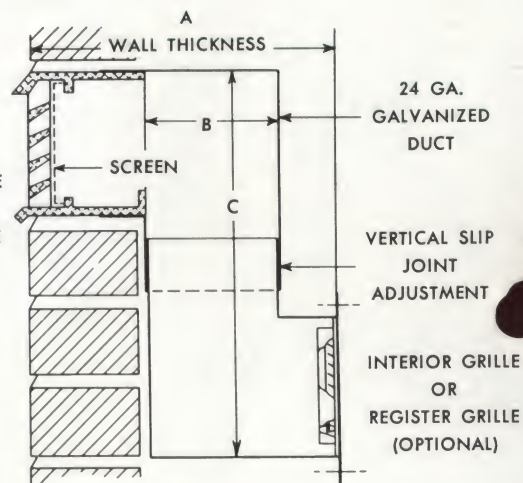
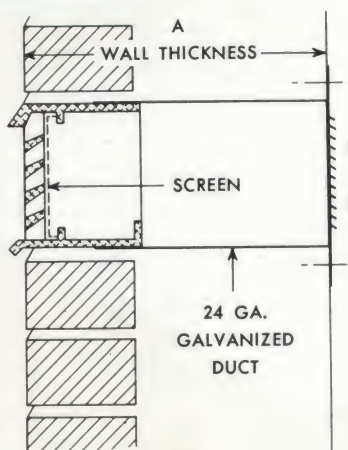
duct extensions

IN ORDERING SHOW A, B, C DIMENSIONS

C-S Brick Size Vents may be supplied with straight ducts or Z-ducts as required. Standard C-S Z-ducts are 24 gauge galvanized iron. Aluminum or stainless steel ducts can be furnished per architects' specifications. In ordering show A, B, C dimensions.

C-S Z-ducts are ideally suited to ventilating any sub-grade area. Supplied with integral elbow and vertical slip-joint adjustment, they are easily and simply installed to any depth.

When ordering ducts clearly specify material, gauge, and type of grille or register required. Grilles and registers should always be used with duct extensions.



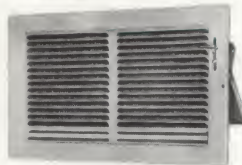
grilles and registers

interior grilles



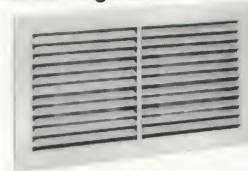
C-S Interior Grilles are rugged, low in cost, and good looking. They are made of 20 gauge steel, one piece construction, with angle frame. Blades set at 20° angle conceal opening and add strength. Grilles are secured with stainless screws. All C-S Grilles and Registers are 20 gauge steel finished in beige prime coat.

register grilles



C-S Register Grilles have stamped louvered faces that provide ample free area. All register grilles are furnished with an "Adjusta-Stop" device adjustable with a screw driver. This device may be used to lock the damper in the closed position or to provide an adjustment stop for any opening desired.

multi-valve registers



The C-S Multi-Valve Register Grille is particularly suitable for exposed applications. This unit is very sturdy and does not invite tampering. The exterior deflection bars are adjusted by key and their position cannot be changed unintentionally. The interior opposed-action valves are also key operated from the exterior of the register.

construction specialties, inc.

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phone: SHerwood 5-8000

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CONSTRUCTION SPECIALTIES, LTD.
Box 52 Downsview Post Office
Toronto, Canada
phone: MEltrose 3-6506



operating brick size vents

exterior operator

The C-S Flush Face Exterior Damper Control or Fusible Link Damper Control is available for model 2B, 4B, 6B, 9B, 6WB, 1JB, 4JB, MBL-1, MBL-2 and MBL-6 brick or block size vents. The C-S exterior operator is neat, unobtrusive and tamperproof. It is an economical all-aluminum unit which is controlled by a removable key-type operator. Specify C-S Flush Face Exterior Damper Control with key-type operator.



fusible link

The fusible link damper control is supplied with a 160° fusible link. Operation is instant and positive. Specify C-S fusible link operator FU 160°. If other thermal rating link is required specify necessary temperature.



duct e

C-S Brick Size Vents are supplied with straight or angled blades as required. Standard sizes are 24 gauge Aluminum or steel. They can be furnished in other materials to meet specifications. In sizes A, B, C dimensions.

C-S Z-ducts are used for ventilating any building. Supplied with in-line vertical slip-joint which are easily and safely adjusted to any depth.

When ordering specify material, size of grille or register. Grilles and registers may be used with

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VERTICAL SLIP
JOINT
ADJUSTMENT

INTERIOR GRILLE
OR
REGISTER GRILLE
(OPTIONAL)

grilles

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interior grille:



C-S Interior Grilles are designed for neatness and good looking. They are made of 20 gauge steel, one piece construction, with angle frame. Blades set at 20° angle conceal opening and add strength. Grilles are secured with stainless screws. All C-S Grilles and Registers are 20 gauge steel finished in beige prime coat.

Interiors that provide ample free area. All register grilles are furnished with an "Adjusta-Stop" device adjustable with a screw driver. This device may be used to lock the damper in the closed position or to provide an adjustment stop for any opening desired.

Interior Grille is particularly suitable for exposed applications. This unit is very sturdy and does not invite tampering. The exterior deflection bars are adjusted by key and their position cannot be changed unintentionally. The interior opposed-action valves are also key operated from the exterior of the register.



From the collection of:

Mike Jackson, FAIA

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